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SALPIGLOSSIS SINUATA.

VICK'S ILLUSTRATED MAGAZINE

VOLUME XXIII.
SERIES III, VOL. I.

FEBRUARY, 1900

No. CCLXVI.
No. V.

THE DRACAENAS OR DRAGON TREES.

OF these beautifully colored plants I had but a slight knowledge until good fortune sent me one winter for a two or three months' sojourn near the United States nurseries, of Short Hills, New Jersey. Here I saw them grown by thousands, a house or two sometimes being given to the culture of a single variety, and first learned how different were their forms and how marvelously bright and pretty their color when clean and well grown.

Since then I have always thought it quite

too bad that two of the least attractive forms of all, *D. indivisa* and *D. terminalis*, should be the ones most largely grown by ordinary florists, and, of course, the ones most commonly seen in our homes. If they were the hardiest and easiest grown of any there would be good reason for this, but they are not.

Of late years glossy, stiff-leaved little *Dracæna Sanderiana* has been slowly gaining a place for itself, until now it is a favorite among all people of good taste. It is of very distinct character, neat and natty enough for any use whatever. The leaves are small, narrow, thick in texture, silvery green, bordered with creamy white. Because it is diminutive and rather slow-growing, it is usually "made up" with three to nine plants massed in a pot to form what is called a good specimen.

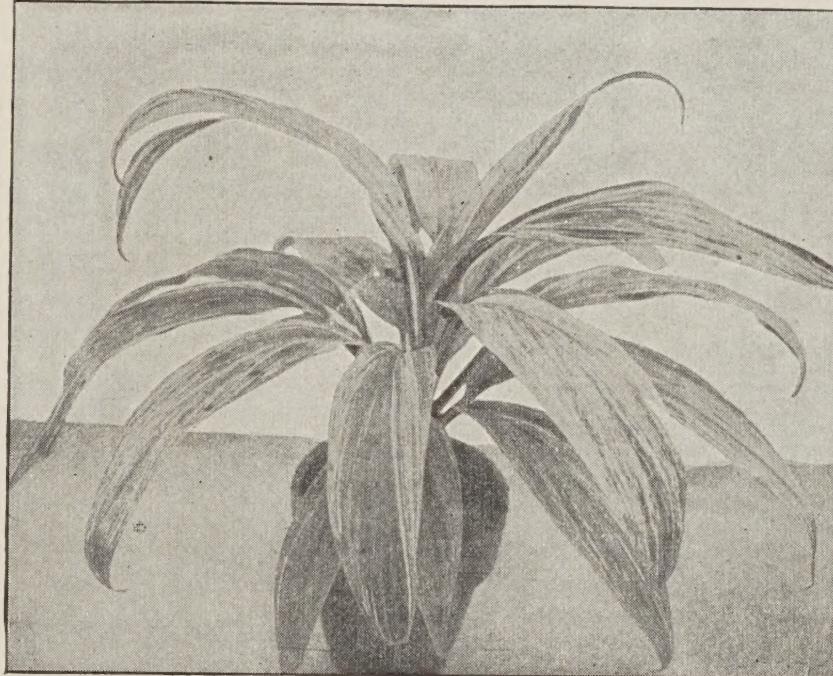
These made-up specimens certainly are

pretty, but they do not grow so well or stay pretty so long as the plants that are given each a separate pot to itself. There is a fad, too, for making up tall plants of this *dracæna* in the center of jardinières, with other plants, like *D. indivisa*, in a circle around it.

Unlike most other sorts, *D. Massangeana* has its stripes and blotches of bright color in the center of the leaf, which is very broad and satiny. The plant is of most graceful growth, and the thick-textured leaves are very brilliant. Its requirements in the

way of light, heat, soil and moisture are easily met. Most people think this form was a seedling of rich, creamy-leaved old *D. Lindeni*, which is, indeed, much like it, as well as much handsomer, to my mind. A clean, well-tended, vigorous plant of *D. Lindeni* is really one of the freshest-looking, most attractive plants that one can grow. The variegation, always rich and broad, is a sort of "hit or miss" affair. Sometimes whole leaves will be pure white or green; again the creamy stripes strike alternately edge or center of leaf, very often on both. The young leaves in the center are always pure cream-white.

Dracæna Hendersoni is also most freakily spotted and splashed with dainty blotches of pink, crimson, white, and light or dark green. It is an exquisite plant when robust, but requires a little more warmth and care than



DRACÆNA HENDERSONI



DRACÆNA MASSANGEANA

the other species described in this article. The zebra of the family is *D. Goldieana*, a very compact, dwarf-growing little plant, with great individuality. The ground color is rich green, marked with narrow, cream white transverse blotches and stripes. The leaves are broad, thick and not easily injured.

Another especially elegant dwarf and broad-leaved species is little *Dracæna Anerleyensis*. The leaves are thick, broad, rounded and very dark, polished green, touched with pink and crimson on the edges. They sweep out thickly from the stem in graceful curves, the color brightening to vivid tints that spread entirely over the young leaves unfolding at the top. This dwarf plant is very enduring and stands a great deal of knocking about.

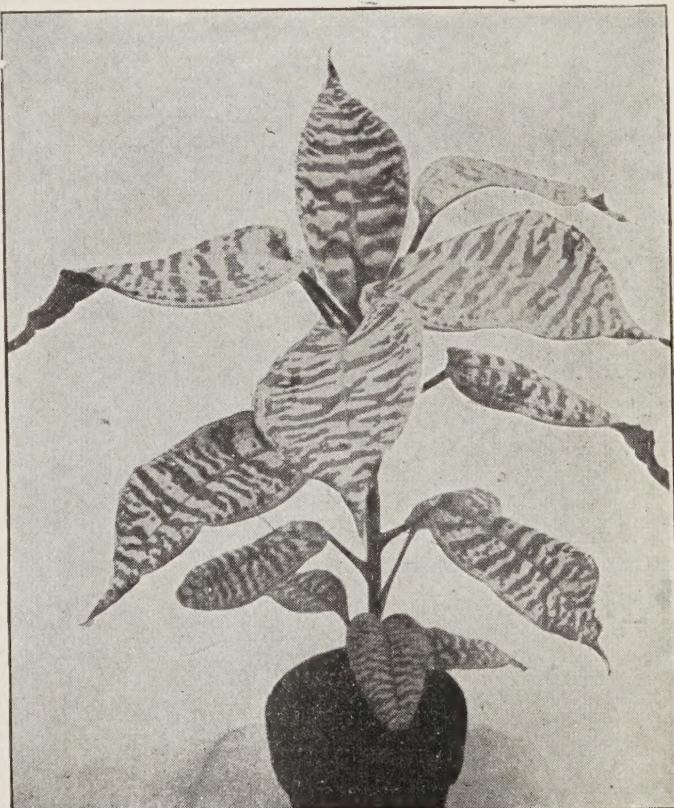
The *dracænas* require more sun than palms to keep them bright and healthy looking. My own experience is that they will stand much more neglect and careless treatment.

L. GREENLEE.

THE GARDEN SEASON OF 1899 IN THE MIDDLE WEST.

THE season now ended was a peculiar one in this portion of the Middle West. In the spring months the roses in the main perished. The single yellow, an old-fashioned pink June rose and the Dinsmore survived without damage, and enlivened the grounds with bloom and fragrance. The lilies all perished save the wild *Lilium superbum* and

L. Canadense and *L. speciosum*. These, however, bloomed delightfully, causing the others to be almost forgotten. Three varieties of *hemerocallis* courted esteem by richness of flower and persistent blooming. It is a blessed virtue in a plant to furnish flowers for a long time. A moderately homely flower which is a constant bloomer wins esteem rather than the short-lived, gaudy one. The roses which were killed to the ground sprang up quickly, and when frosts came in the fall the clumps were as large as ever. Not a *spiræa* was injured in the least. The *rudbeckia* was a mass of green and gold for a long season, and was "a wonder to many," as the Psalmist remarks of himself. The *akebia*, however, at the corner of the manse, was killed to the ground. It has started again, but seems afraid to grow. It was fifteen years old and had reached the roof. It was almost disheartening to see the ruin. The violets left in the ground, but covered, all winter, survived and started grandly. Singular as it may seem, the prickly pear cactus came within an inch of perishing. Acres and acres of this plant grow in the Yellowstone region, and it was looked upon as an ironclad. This life, however, is full of surprises. Of other shrubs, besides the *spiræas*, which lived, were the *exochorda*, the purple barberry, the *caragana*, the Siberian *Arbor Vitæ*, the lilacs and the *syringas*. Of course, the snowballs and *Pyrus Japonica* seemed to have paid no attention whatever to

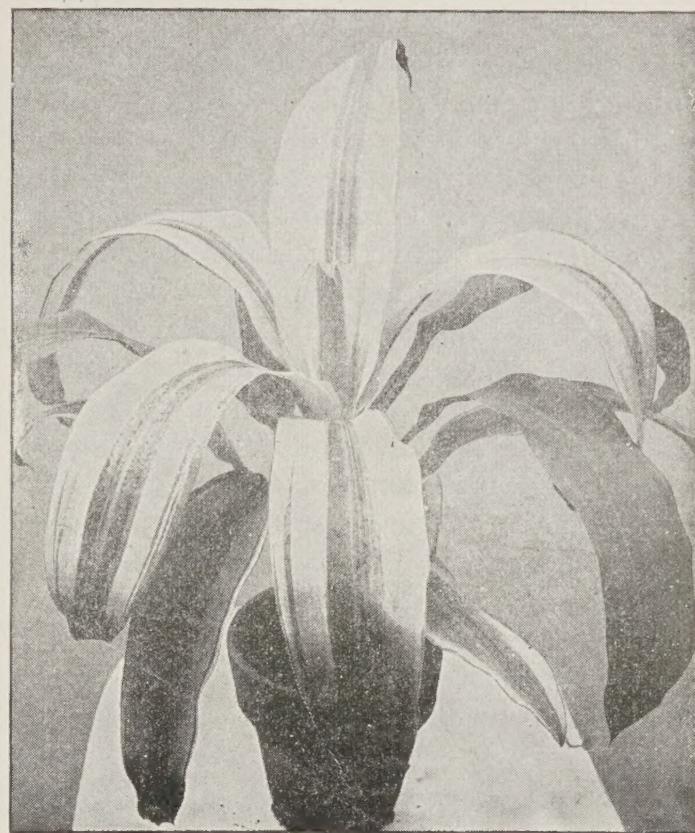


DRACÆNAS GOLDIEANA

the cold, and were fragrant and beautiful. Some kinds of clematis suffered; the red variety, being at the corner of the porch, was quite well protected and bloomed magnificently. Of five varieties which adorn the grounds none perished. But the larger flowered varieties did not bloom. The African tamarix is as dead as a stone. This bush was always a favorite, and now it is dead. Alack-a-day!

However, we may not have such a winter again, so the motto shall be, "Try, try again," and keep on trying. It is folly to be easily discouraged. Let every one of us who delight in flowers and pleasant looking homes, try again everything that has been lost. To enjoy the garden plants as they have been for fifteen years will warrant effort after effort. To make up for the loss of the perennials last season, their places were supplied with annuals. How the petunias, the gladioli, the portulacas, the verbenas and the poppies did try to show themselves. The entire neighborhood was astonished. So was the parson, but his astonishment was because his visitors had none. A home without flowers is like a day without sunshine, gloomy and lowering. Even now the writer stops occasionally to survey and enjoy his beauties in the windows. It is the tropics on the forty-first parallel of north latitude.

The Columbian raspberry stood the winter with impunity. The matron averred that it was the largest and best raspberry that she



DRACÆNA LINDENI

ever beheld. Its flavor is most excellent, its size marvelous, and it is as prolific as the plants of Goshen. Then, judging by its behavior last winter, it is ironclad in hardiness. The Rathbun blackberry also endured the hardness of last winter like a good soldier. Of four varieties of blackberries in the garden, it is much the largest and best.

Indianola, Iowa.

THE PARSON.

PLANTING TREES AND SHRUBS A MEANS OF INCREASING LAND VALUES.

A day's ride on any of our railroads would present to our views the barrenness of the average home grounds. This condition is a result of natural causes found always in countries where the development has been phenomenal. The first settlers had but the one idea, to make everything count towards financial benefit, consequently any money spent in horticultural products was confined chiefly to the planting of certain fruits having a commercial value. As immigration and development progressed westward the people remaining naturally turned their attention to the improvement of their places by the planting of ornamental trees and shrubs, the New England States taking the lead, and this practice is now gradually following westward the commercial planting of previous years.

The first value of town or city lots varies

but little, being governed by distance from the proposed business center, but very soon we find on some street the price per foot is far in excess of other locations. The reason, however, is very evident—improvements—fine road beds, uniform planting of shade trees, smooth lawns and artistic arrangement of shrubs. All this may have been brought about through the influence of one resident. We now have environments, increasing all future property values adjacent to this one street.

Another illustration. We take two lots on an improved street, building two houses identical in cost and construction. One lot has good walks, a fine lawn, and is tastefully planted with shade trees and shrubs while the other is neglected, with perhaps the exception of a few unsuitable shrubs planted in wrong

places. How much more would a contemplative purchaser give for the one than he would for the other? This is simply increasing a local value by expending a few dollars together with a little labor, it being absolutely the only method to increase the value of this, or any other lot, on that particular street.

There is nothing more plainly evident to the owners of property than the importance of planting as a means of increasing values and nothing more deplorable when we realize that it has been so universally ignored. There is, however, much encouragement from the knowledge gained from interviews with many large nursery firms, that during the last ten years sales of ornamental stock have increased at least fifty per cent., showing that education in this work is now running in the right direction.

H. C. PHILLIPS.

**

SIMPLE PRINCIPLES IN FLORAL DESIGN—I.

BY the time a person of known artistic ability and taste is called upon to accept the chairmanship of a committee on floral decorations a few times, he begins to realize that the scope of such work deserves the name of an art by itself. A hall, church, or other public building is to be decorated for some special occasion, and of course the best talent and management are needed in order to make a respectable, if not a beautiful showing from a supply not always perfectly satisfactory in quality nor unlimited in quantity.

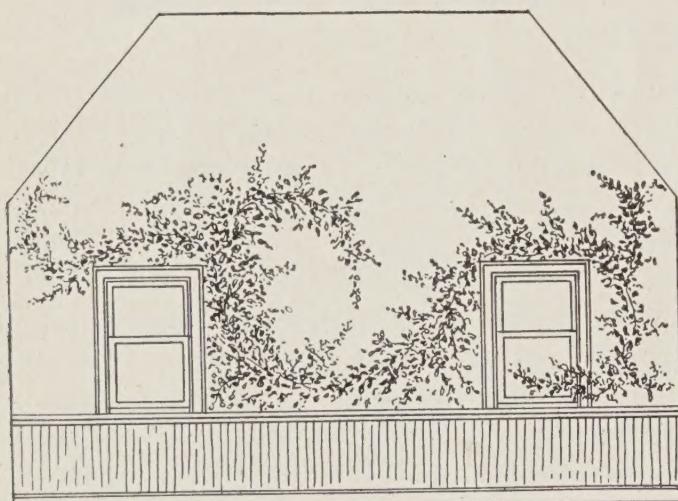


Fig. 1.—A DESIGN IN SMILAX

Artists' advice is invariably, "Be natural, simple, harmonious," and all that; but few of them take the pains to explain the how. It is the modest purpose of this series of studies on the principles of floral designing to investigate a little along these neglected lines.

Upon viewing the field of operations and taking an account of assets, the first question that arises is likely to be, "Where shall I begin, and what spot shall I leave untouched?" A more or less confused panorama of railing, altar, pillars, windows, lines of fresco, carving, etc., does not always form an inviting array. There are lights, dark corners, points of divergence and meeting, symbolic arrangement of furniture and hangings—all must be considered. Right here a general suggestion meets a reasonable recognition: In a public building, especially where the audience remains seated toward the front, it is apparent that

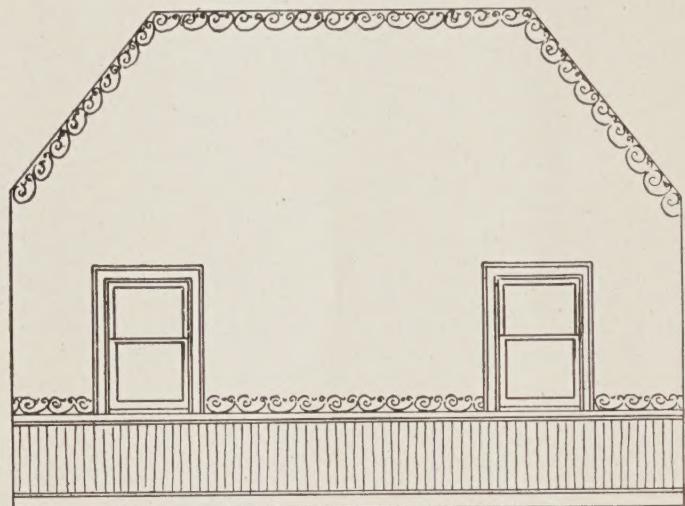


Fig. 2.—SIMILAR WALL WITH A BORDER

decorations should be concentrated at the front, if not confined there entirely.

First, get an idea of the shape of the building into the mind. Strive to analyze the impression which its general appearance makes upon entering it. Get the idea of the builder so far as appearances are concerned. If comfortable and roomy, one has plenty of latitude for sweeping lines and broad curves; but if ceilings are low, one must be concerned to avoid covering walls heavily, but instead use light and intricate designs. How to do this brings on the next query: Are the walls plain or decorated? If perfectly plain, then only is one free to begin and plan independently. This is a very important consideration. A perfect blank is the only place open for an entirely new design. If there is a decoration, such as paper, frescoing, carving, painting or such, the plan of thought that is here written must next claim the attention. A good decoration is a harmonious whole and its every line is a chapter in a serial, and if he is worthy the name the decorator speaks in his lines and combinations of lines, being understood according to his skill in writing. What the

floral decorator must now do is to discover the idea that is conveyed by the lines of permanent decoration, as he has just done with the building itself, and then he must put himself in harmony with what he has discovered, and follow and emphasize the same. He should see to it that his decoration shall bear to the permanent decorative features the same relation that the lichen does to the bark, beautifying, yet in no sense obscuring.

Take, for example, a chapel wall which it is proposed to decorate for late winter or early spring. If there is no decoration on the wall we are at liberty to begin one. In cut No. 1,

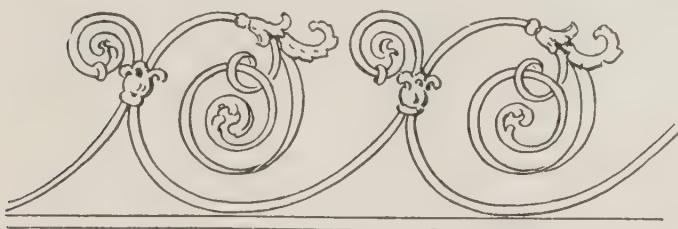


Fig. 3.—ENLARGED PORTION OF THE BORDER

we have made a design in southern smilax which allows a perfectly natural arrangement, yet is easily confined to the general outlines of the wall, keeping well within the boundary lines, which conformity brings to mind another axiom: Even the boundary lines of a wall space must be respected and followed, and not rudely crossed. Southern smilax, by the way, is a very satisfactory material for decorating large buildings; and besides being reasonable in price and lasting, it has a long season, being obtainable from October to March.



Fig. 4.—SIMPLIFIED PORTION OF THE BORDER

In illustration No. 2 there is a similar wall with a border. Attention needs first to be directed to an analysis of this border, for it must form the basis of any proper additional adornment. An enlarged portion of the border appears in No. 3. The next step is to simplify this design and repeat its adjacent lines, and it appears so treated in No. 4. By this process one is able to get the tone of the design, and can immediately detect a resemblance between its plan and that of some of the flowers at hand. At this season there

are Easterlilies, daffodils, tulips, hyacinths and other bulbs that are easily forced. Selecting one of the simplest of them, the tulip, as in No. 5, make a sketch of the flower with its leaves and separate the sketch into its component lines, as was done with the section of Fig. 5—CONVENTIONAL DESIGN OF THE TULIP

the border in cut No. 4. Do not the two sets of lines closely resemble each other? Then there is nothing to prevent using them together, and the tulip with its foliage may be placed in connection with the section of the border, as is shown in No. 6. Repeat the experiment indefinitely at intervals along the whole extent of the border. Elaborate to the extent of pleasure or purse. It is scarcely possible to make too obtrusive a design on this principle, because it does not quarrel with existing conditions.

Work on the same lines, literally and figuratively. Through years of experience I have adhered rigidly to this principle, and I have yet to find a place where it would not apply in some of its many phases.

Now, as to the mechanical part. Cut flowers to keep more than six or eight hours must have a water supply, and for this there may be provided a narrow, shallow pan or several pans about an inch wide, tacked on top of the wainscoting and filled with dampened packing moss, and the upper end near the flowers



Fig. 6.—COMBINATION OF BORDER DESIGN AND THE TULIP

secured to the wall by a double-pointed tack. The stems may rest down in the moss. If the flowers or leaves droop a little it will add to the general effect. Of course, due care must be exercised with regard to the selection of colors, but this subject is well worthy of extensive treatment by itself.

The use of numerous small vases of flowers scattered promiscuously about a church should be persistently discouraged. As far as harmony in size and color will permit, let them be massed at some prominent part.

Superintend, if possible, the buying or collecting of flowers to be used, and rule out small contributions of this and the other thing and have a distinct predominance of one or two kinds of flowers.

The process may seem a little tedious at first, but after one or two trials one can easily learn, first, to analyze permanent features and their decorations, and then in adding floral and foliage adornment learn to consider, respect, concentrate. GERTRUDE BLAIR.

GLOXINIAS.

WHEN a friend gave me a leaf of her gloxinia and told me to root it in water or in earth, as I would any cutting, then to set it out, keeping the soil moist, and not to throw it away if the leaf dried up and dropped off, for by that time a tiny bulb would have formed, which, in due season would begin to grow, my interest was thoroughly aroused, never flagging from the moment the pretty green, velvety leaf was placed in a small glass of water. This was done in September. My interest was intense. The directions were closely followed; directly the leaf was well rooted it was potted and watered as it seemed to need moisture.

After a while it began to shrivel and dry up, finally dropping off. Had my faith in that friend's plant knowledge been weak I might have thrown the whole thing away in disappointment for, after the little dry leaf dropped off, there was not much left to watch—nothing but a pot of dirt. But my confidence in her statement was unshaken. All my life her rare and beautiful plants had filled me with delight. Blessed be her memory; for through her influence an interest in plants was awakened; love for them strengthened year by year, until it has grown to be a never-failing source of the purest pleasure. Many weeks through the bleak winter the tiny bulb, hidden

in that little pot of earth, lay sleeping. When the warm spring days came, with more and brighter sunshine, joyfully I hailed the appearance of those rich, velvety, green leaves. It is a thirsty plant when growing, just reveling in warmth and moisture. I gave it all the water it wanted, and it grew so fast through the spring and early summer that it was a delight to watch it. In August it was crowned with nine handsome blossoms, the color being of



GLOXINIA IN JULY.
Bulb potted in January.

the richest shades of crimson, and lasting a long time.

I know of no plant more interesting or more satisfactory for a summer decorative plant. I have had them in bloom as early as April.

Last January I separated a pot of bulbs which had been growing undisturbed for two or three years. There were one dozen bulbs in the pot. I repotted each one separately. Four of them bloomed during the summer. The photograph shows one of them as it looked on the first day of July. Afterwards more buds opened; one day it had ten of the gorgeous flowers. Wishing to get a blue one and a pure white, I ordered from a strange catalogue offering "bargains" in gloxinias.

Out of five bulbs only one blossomed, and that one was a pure garnet in color. The bulbs appeared to be in a decaying state. Those "bargain" bulbs that disappointed me so taught me a lesson, after all, which I think I shall never forget—a little more money for bulbs that will not bring disappointment with them.

When done blooming, and the foliage begins to turn yellow, less water is needed until the plant is ripened off, then keep it dry during the cold winter months. When the mercury falls 12° or 15° below zero, which is as low as we ever experience so close to the sea, I shut

It is a plant that delights in warmth, but not in the broad glare of the sun. A flickering sunlight suits it still better, and it will thrive in a north window. I always give the plants plenty of sun through the autumn months, when the foliage is ripening.

MARY MOORE THURLOW.
Cutler, Maine.

**

THE JERUSALEM CHERRY.

Under this name two species of plants are cultivated which have a general resemblance, *Solanum pseudo-capsicum*, and also its dwarf form, and *Solanum capsicastrum*. The fruit



SOLANUM CAPSICASTRUM
2-YEAR PLANT

my gloxinia pots at bedtime inside a small upholstered box, which serves as a chimney-seat. There they are safe from any frosty breath which might creep in should the fire burn low. Sometimes the new growth starts as early as February.

Next spring I shall try again to add a pure white and a blue to my collection. It is a great pleasure to care for gloxinias, as they are so rarely infested by any of the insect pests. The aphis and the white worm sometimes attack a weak bulb. Care must be taken not to drop water on the foliage, should the plant stand in the sunlight.

of the latter is brighter and not quite so large as that of the former. Both are useful plants for winter decoration when covered with their bright red or scarlet berries, and are easily raised from seed sown in winter or early spring. The plant from which the above engraving was made was only about ten inches in height and was almost literally covered with its bright fruit. It is introduced as an example to show the effect of cutting down a one-year plant in the spring, repotting, starting in heat and then growing on through the summer. The effect is to dwarf the plant and cause it to set a great wealth of berries.

THE TRAVELLER'S TREE.

THE Traveller's Tree is a plant of remarkable appearance. It belongs to the same natural family of plants as the banana and the canna, but it shows a striking peculiarity in producing its leaves or leaf-stems all in one plane, making it distinct from every other plant. The botanical name is *Ravenala Madagascarensis*.

and is held in the channels of the leaf-stems, where the thirsty traveller may obtain it. It is true that water does so collect, but that the plant is ever of any special benefit to the traveller in the manner stated is extremely improbable, for the reason that the plant naturally grows by the edges of marshes and water courses, where there would be no difficulty in



The Traveller's Tree

gascarensis. The plant in its wild state is found only on the Island of Madagascar, but it has been distributed through tropical countries, being cultivated as an ornamental plant. The specimen from which the photograph was taken for the present illustration was growing on private grounds at Singapore. The name Traveller's Tree has been applied to it, so it is said, because water from rain and dew collects

RAVENALA MADAGASCARENSIS

procuring water in abundance. The origin of the name, we can only think, therefore, is the result of a pleasant conceit, similar to those that have given rise to many other popular plant names.

This plant, besides being planted for ornament in gardens in tropical countries, is sometimes cultivated in large hot-houses and winter gardens in Europe and this country.



THE BOLTONIAS.

The boltonias are hardy herbaceous plants with aster-like flowers. Several species have been cultivated, a number of which are Asiatic; the two finest kinds are, however, American, natives of the Northern and Western United States. Our readers are here presented with an illustration prepared from a photograph of some plants of *Boltonia latisquama* growing in a border. The average height of this plant is about five feet, but may be more or less according to the character of the soil. The plants branch from the upper portion of the stem and thus form large heads which bear a

great profusion of flowers, from July to September. The flowers are about an inch in diameter, of a bluish violet or lilac color. In the engraving the plants are shown as blown over by the wind, being top-heavy with their load of bloom. The other desirable American species is *B. asterooides*. It is very similar to the one already described, except that the flowers are of a soft rose color. It is a question of botanists of today whether *B. latisquama* is not a variety of the last-named species. These are excellent plants for the border of a shrubbery or a group of trees where tall plants would be suitable, or for the embellishment of a water margin.

GARDEN ANEMONES.

Continued from last number.

A. n. var. ROSEA, Hort. (*A. var. rubra* fl. pl. Hort.) Flowers reddish purple. This form is much desired.

A. TRIFOLIA, L. Sp. Pl. 540. (*A. lancifolia*, Pursh. *A. nemerosa*, var. *trifolia*, Willd.) Erect, stout, six to fifteen inches high, smooth or nearly so; radical leaves long-petioled, divided into 3 or more parts, dentate, sometimes lobed; involucral leaves short-petioled, 3-parted, the divisions oblong-lanceolate, acute or acuminate, dentate, often somewhat lobed, 1-3 inches long; flowers solitary, 1-1½ inches broad when expanded; sepals oblong, white; akenes oblong, finely pubescent; styles hooked; head of



ANEMONE JAPONICA

fruit globose, nearly $\frac{1}{2}$ inch in diameter. May; in mts. June-July. Mts. of Ga. to S. Pa.; also in Central Europe. B. M. 6846. (†). This type is said to intergrade with *A. quinquefolia*. It is very striking in its pretty, evenly dentate, light green leaves. Why is it not used in our gardens?

A. QUINQUEFOLIA, L. Sp. Pl. 541. (*A. pedata*, Raf. *A. minima*, DC. *A. nemerosa*, Michx. *A. nemerosa*, var., DC. and Gray.) This American species, according to Dr. Britton, differs from *A. nemerosa* in having smaller flowers, involucral leaves less lobed, foliage paler; and much more slender stem and petioles. April-June. Ga. to New Bruns., west to Calif. and Alaska; also Siberia and Russia.

A. LYALLII, Britton, l. c. 227. (*A. quinquefolia*, var., Robinson.) Rootstock horizontal; stem slender, two to four inches high, nearly glabrous; leaves 3-parted, divisions ovate lanceolate, obtuse or acute,

(†) This mark indicates that the plant has been tried in gardens with success; but I have not found it listed in American catalogues.

blunt toothed; flowers small, solitary, pale blue or whitish; peduncles longer than petioles of involucre; sepals oval-oblong, obtuse; akenes pubescent. April-June. Vancouver, Washington, Calif. (†)

DDD—ROOTSTOCK HORIZONTAL; PLESHY OR SOMEWHAT TUBEROUS.

A. GRAYI, Behr. in Kellogg, Bull. Cal. Ac. 1:5, 1884. (*A. Oregonia*, Gray. *A. cyanea*, Freyn. *A. nemorosa*, var. Greene. *A. quinquefolia*, var. *Oregonia*, Robinson.) Rootstock somewhat running, fleshy, brittle; stem slender, three to twelve inches high; radical leaves slender petioled, 3-parted; leaflets crenately serrate; involucral leaves similar but on shorter petioles and the terminal leaflets 3-lobed; sepals 4-7 (often 5), oval to obovate, blue, varying to purple or nearly white: akenes 15-20, oblong, pubescent; styles short and slightly hooked; head of fruit globose. Oregon and Wash. Introduced to gardens west of Rockies 1892.

A. RANUNCULOIDES, L. Sp. Pl. 541. YELLOW WOOD ANEMONE. (*A. lutea*, Lam. *A. flava*, Gilib.) Stem three to eight inches, from elongated root-stock, somewhat tuberous: leaves 3-5-parted, divisions deeply cut and serrated; flowers golden yellow, usually solitary, single or semi-double. March and April. Rich light soil in open places and woods. Europe and Siberia. Gn. 35: 699.

CCC—AKENES NEARLY SMOOTH; HEAD OF FRUIT A FLATTENED SPHERE.

A. RICHARDSONII, Hook. Fl. 1:6, t. 4, 1829. (*A. ranunculoides*, Rich. *A. Vahlii*, Hornem. *A. arctica*, Fisch.) Rootstocks and stems slender, plant pubescent, three to twelve inches high; radical leaves with slender petioles, reniform, 3-5-parted; lobes acute, broadly oblong, toothed or crenate; leaves of involucre similar, but sessile; the solitary flower $\frac{3}{4}$ inch broad, usually white or nearly so, sepals usually 6, oblong; akenes ovate-oblong, compressed, nearly smooth; hooked style of same length; head of fruit a flattened sphere. Summer. Greenland, across Am. to Siberia. (†) Worthy of a place in a hardy border.

BB—PEDUNCLES 2 TO 6 (MOSTLY 3.)

C—AKENES WOOLLY OR VERY SILKY; SECONDARY INVOLUCRES USUALLY PRESENT.

A. VIRGINIANA, L. Sp. Pl. 540. (*A. hirsuta*, Moench. *Abelmoschus petiolaris*, Raf.) Plant hairy, two to three feet high, stout, branching at the involucre; the petioled involucral leaves 3, 3-parted, the leaflets cleft and lobed; basal leaves similar, broader than long, on long petioles; peduncles not leaved (or the lateral ones 2-leaved); flowers greenish or white, 1 to 1½ inches across; akenes woolly, in an oblong head, styles short, awl-shaped; head of fruit $\frac{3}{4}$ to 1 inch long, oval or oblong. June to August. Woods and meadows, central U. S. northward. Introduced 1891. Gard. Mag. 33: 763.

A. RIPARIA, Fernald, Rhodora, 1:50, 1899. Wood. This new species is said to differ from *A. Virginiana* in its slender habit; thin leaves, with cuneate-lanceolate or cuneate-ovate divisions with sharply toothed segments; flowers clear white and a month earlier; fruit more slender and a little shorter. It is said to differ from *A. cylindrica* in its shorter fruit spike,

commonly branching peduncles, and its white flowers. June. Rocky banks and shaded ledges, N. Eng., N. Y. (†) I accept this specific name with some doubt, for fruit heads of *A. Virginiana* vary much in diameter.

A. JAPONICA, Zucc. & Sieb. Fl. Jap. 1: 15, 1835. AUTUMN ANEMONE. (*A. elegans*, DCne. *A. hybrida*, Vilm. *Atragene Japonica*, Thunb. *Clematis polypetala*, DC.) Stately, branching stem two to three feet high; plant soft and downy; leaves ternate, much lobed and toothed; flowers rosy-purple or carmine, 1-3 whorls of sepals, 2-3 inches in diameter; on long peduncles from the leafy involucre; stamens yellow; akenes silky. Sept. to late frosts. Rich soils. China and Japan. Introduced 1844. Gn. 30: 558. B. M. 4341. A. F. 12: 29. A very useful species for mixed borders or for pot culture.

A. J. var. ALBA, Hort. HONORINE JOBERT, THE BRIDE, WHIRLWIND. Two or three whorls of large white sepals, flowers 2-3 inches across, lasting until hard frosts. VICK'S MAG. 14: 47.

A. J. var. HYBRIDA, Hort. (Var. *rosea* and *elegans*, Hort.) Radical leaves 5-lobed, often cordate; lobes twice serrate, flowers somewhat earlier, paler and sepals rather broader than the type. Said to be a hybrid of *Japonica vitifolia*, produced in Royal Gardens 1848.

A. J. var. RUBRA, Hort. LADY ARDILAUN. Probably the same as the type, but having leaves and flowers with a waxy gloss; plant four to five feet high.

A. J. VITIFOLIA, Buch. Ham. ex DC. This is closely allied to the above. Leaves cordate, 5-7-parted. Himalayas. B. M. 3376. B. R. 1385. Not yet much used in gardens here.

A. MULTIFIDA, Poir. in Lam. Encycl. Suppl. 1: 364, 1810. (*A. commercioniana*, DC. *A. Hudsoniana*, Rich. *A. globosa*, Nutt. *A. sanguinea*, Pursh. *A. Baldensis*, G. Don. *A. lanigera*, C. Gay. *A. narcissiflora*, Hook & Arn. *A. decapatala*, Hook. f.) Plant silky-hairy, somewhat branched, one-half to one and one-half feet high, from a branched, upright root stock; main involucre 2-3 leaved, others 2 leaved or naked, short petioles; root leaves similar, or 2-3 times 3-parted and cleft, divisions linear; flower $\frac{1}{2}$ - 1 inch across, red, varying to white or yellow; akenes very woolly. Early summer. Rocks and uplands, Middle States to Hudson Bay. Chile. Introduced 1891.



ANEMONE FULGENS ($\frac{1}{4}$ size).



ANEMONE PATENS,
VAR. NUTTALLIANA.
(flowers and fruit $\frac{1}{2}$ size).

CC—AKENES SLIGHTLY SILKY, PUBESCENT OR GLABROUS; SECONDARY INVOLUCRE USUALLY WANTING OR THE LATERAL PEDUNCLES BRACED NEAR THE BASE.

D—FRUIT IN A GLOBOSE HEAD.

A. FANNINI, Harv. Gen. S. Afr. Pl. 2ed. 2, 1863. Rootstock stout, woody; stem two to five feet high; plant silky villous throughout; leaves roundish, 8-24 inches across; 5-7 lobed; lobes rounded, obtuse, irregularly toothed; petioles 1-2 feet long; involucre of 2 (rarely 3) linear bracts, 1-3 inches long, entire or with lobed tips; peduncles 2-3; flowers 4-5 inches across, pure white, fragrant; sepals many, linear-lanceolate; carpels numerous, silky; style slender, glabrous, twice the length of the ovary. Natal. B. M. 6958. Gn. 34: 664. Quite hardy but not yet used in the trade.

A. MEXICANA, H. B. K. Nov. Gen. 5: 33, 1821. Erect, twelve to eighteen inches high; silky-hairy; root leaves petioled, 3-parted; leaflets oval, incised and mucronately dentate; involucre 2-

leaved, sessile or petioled; flowers 1-4; the central peduncle naked, the others bracted at the base; sepals 4-6, white, $\frac{1}{2}$ inch broad, oval or obovate, obtuse; akenes pubescent, styles short; head of fruit nearly globose. Summer. Mexico. (†)

A. HEMSLEYI, Britton, I. c. 231. A little taller than the last and much like it; leaflets slightly stalked and acuminate; the two involucral leaves short-petioled, with obtuse bases, only 3-cleft, sepals larger than in the last; flowers 3-6; akenes glabrous, head of fruit oblong. Region of Vera Cruz. (†)

DD—HEAD OF FRUIT CYLINDRIC.

A. CYLINDRICA, Gray, Ann. Lyc. N. Y. 3: 220, 1836. Rootstock upright; plant erect, one to two feet high, silky-pubescent throughout; branched at the involucre; radical leaves broader than long, on long petioles; 3-5-parted, the divisions somewhat wedge shaped, incisely toothed; involucral leaves on petioles about 1 inch long; flowers usually 1-6 on long, usually naked peduncles; sepals 5-6, greenish white, oval or obovate; akenes compressed, woolly; styles short-subulate; head of fruit cylindric, 1 inch or more long. June - August. Dry grounds. U. S. and Canada. (†)

CCC—AKENES SMOOTH
AT FIRST; FLOWERS
WHITE, SOMEWHAT
UMBELLATE, OR
PLANT DICHOTOMOUSLY BRANCHED.

A. CANADENSIS, L. Syst. 12ed. 3, App. 1-5 present size).



ANEMONE HORTENSIS.
(before it was much improved).

231, 1768. (*A. Pennsylvanica*, L. *A. irregularis*, Lam. *A. acutifolia*, Michx. *A. dichotoma*, var. MacM.) Hairy, stout, one to two feet high, branching at or above the involucre; the 3 leaves of the main involucre sessile, 3 cleft; upper involucres each 2-leaved; basal leaves broader than long, much divided, cleft and toothed; petioles long; flowers white, 1-2 inches across; akenes wing-margined, naked becoming pubescent, grouped into a spherical head. Summer. N. Am. Introduced 1891. Gng. 2:21.

A. DICHOTOMA, L. Sp. Pl. 540. This is closely allied to the last, but is distinguished by its sessile leaves clasping the stem; sepals slightly purple; akenes glabrous, ovate. Siberia and Russia. Species in American gardens referred to this name are

seldom, if ever, of this type, but should be called *A. Canadensis*.

A. NARCISSIFLORA, L. Sp. Pl. 542. (*A. umbellata*, Lam. *A. fasciculata*, L. *A. aconitifolia*, Turoz. *A. speciosa*, Adams. *A. dubia*, Bell.) Stem erect, rather stout, one to one and one-half feet high; leaves of involucre sessile, basal leaves petioled, 3-5-parted, divisions deeply cut; no secondary involucre; flowers white, $\frac{1}{2}$ -1 across, several in an umbel; akenes smooth, with short styles. May-July. Mountainous regions. N. hemisphere. Gn. 30:173. B. M. 1120.

A. POLYANTHES, D. Don. Prod. Fl. Nep. 194, 1825. This type, of the Himalaya mts., is closely allied to the above and well worthy of introduction. B. M. 6840. J. H. III, 32:259. K. C. DAVIS.

NEW PLANTS AT THE FLOWER SHOW.

FROM the fall flower shows we sometimes get most valuable suggestions about new and interesting plants for our window gardens. Unusually pretty forms that interest us we can watch from year to year in the shows, until the price falls within our reach, or we know enough of the plants to attempt their culture in our own winter garden.

The new butterfly cyclamen is one plant in which I became very much interested. The crimped, wavy petals, fringed at the margin, are the "new" feature, the flowers seeming much larger and lighter on account of it. They have the same rich and chaste range of colors as the older strains, and the plants seem to be as vigorous. The marking of the leaves seems to be even richer than in older sorts. The older forms have always succeeded so well for me that I shall certainly give the "butterfly variety" a trial.

Acalypha Sanderi I have always felt a little skeptical about, but it did make a grand show in Philadelphia last fall. Five large plants were displayed amidst a pyramidal bank of small palms, Boston ferns, orchids and chrysanthemums, all of which they quite eclipsed. They were growing in twelve-inch pots, and though only a year old, were four feet high. At this height they had been topped and a number of branches encouraged to develop, forming a bushy head. The main stems were straight as a dart, and thickly clothed with large, strong-stemmed leaves quite to the ground. The leaves at the top were bright green, and strongly ribbed, making a rich foil for the long red "tails"

hanging from the axil of every leaf. Some of these—most of them, in fact—were from ten to fifteen inches long, and of a pretty carmine-rose color. These are the finest "Medusa plants" I had ever seen. As I covertly ran the long, silky fringes through my fingers I told myself that a little deeper, richer color was all they lacked in rich, odd picturesqueness of effect.

The new rose, *Liberty*, was, of course, the most attractive feature of the show to all rose lovers. The flowers shown were magnificently formed and superbly colored, for Sharon Hill, "the Philadelphia home of the rose," was not far away, and Robert Scott & Sons, of Sharon Hill, have "cradled" *Liberty* thus far in America. The hold that this brilliant, splendid rose has already taken upon American hearts was presaged in its name. How much more we owe to the genius of the rosarian, who makes such jewels of form and color possible everywhere, than to the painter, whose great "originals" usually afford but dingy copies to the lower walks of life!

Begonia Gloire de Lorraine was another radiant little plant, smiling all over with chubby, pink-dimpled little flowers. This plant is not new. It has been grown for a long time by appreciative people, who, perhaps, have helped to cultivate the tastes of others until now there is a great demand for this rosy little beauty. It is freer blooming than any other winter-flowering begonia, and by far the prettiest type I have seen.

L. GREENLEE.

North Carolina.



A. A. A. S.

In the month of August, 1898, the fiftieth anniversary of the American Association for the Advancement of Science was held in Boston, that city so full of historic interest, and so conscious of its intellectual superiority.

It was, therefore, with no little curiosity that in the summer of 1899 the members looked forward to the first meeting of the new half century of the association to be held in Columbus, O. What could Columbus do to entertain this great scientific body?

At the close of the meeting, however, this curiosity was replaced by general and hearty congratulations on the part of the guests, upon the remarkably successful manner in which Columbus cared for their individual comfort and general pleasure.

The meetings were held in the buildings of the Ohio State University, delightfully remote from disturbances by business traffic, and the large campus, with its beautiful trees, many of which are of nature's planting, was a charming place to linger and rest, after the free luncheon which was served daily to the entire body in the Gymnasium Hall.

It was noted that a larger proportion of the older and more distinguished members were in attendance. The section of botany was remarkably well represented. The readers of VICK'S MAGAZINE are more or less interested in the general progress of botany, hence a few details in regard to the work done in this section.

One was impressed with the advancement of botany when listening to the wide range of discussions. Systematic botany, which only a few years ago was the chief field in which botany was developed, seemed but a small fractional part of what is meant by botany at present, while histology and ecology* are constantly growing in importance. The methods have improved so much in late years in labora-

* See John M. Coulter's new book on Ecology or Plant Relations, which is a wonderfully interesting, readable book, without technicalities, and full of suggestive thought for those who are philosophically inclined.

*They whom truth and wisdom lead
Can gather honey from a weed.*
—Cowper.

tory work—microscopes, microtomes, and all appliances and laboratory equipments make it possible for the prosecution of work which would have been impossible only a short time ago. The whole plant is now taken into consideration and studied from every possible standpoint, each specialist well-nigh madly in love with his own field of work, whether he be systematist, histologist, ecologist, or what not.

One day's proceedings was given to the memory of Dr. William S. Sullivant and Prof. Leo Lesquereux, the two eminent pioneer workers of Ohio in bryology, or the study of mosses. Original drawings, type specimens, etc., were on exhibition. Reminiscences brought out by Sullivant Day, as it was called, served to form an excellent background for the present rapid development of botany in its various departments. Mrs. Elizabeth G. Britton gave a chronological record of North American bryophytes since 1850, illustrative of the progress of the study of mosses. It was refreshing to meet a savant, an authority, a peer of any present, and find her a charming woman.

MRS. W. A. KELLERMAN.

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ROSES AND CHRYSANTHEMUMS.

In regard to roses, I would say Crimson Rambler is all right, but of all climbing roses the Empress of China with me is of no account. One rose I think is a grand one, that is Burbank: I think everyone should have this grand rose. It is new, but I predict this will be a favorite. It is not only a fine pink rose, but it seems healthy and a very strong grower.

Childs' Everblooming Chrysanthemum is a poor, worthless thing out of doors. But if you want some good ones plant Glory of the Pacific (pink), Madame Bergeman (white), J. G. Whilden (yellow), Mrs. H. Robinson (white), and John Shri (dark red).

M. T. THOMPSON.

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PALMS do best in the extra deep pots made specially for them.

CRINUMS AS HARDY PLANTS.

I was very much interested in Lora S. La Mance's article, "How I Manage *Crinum Ornatum*," in the November MAGAZINE, and also in her additional note, "Wintering *Crinum Ornatum*," in the December number. *Crinum longiflora* (usually known as *C. capense*), is hardy on Long Island, N. Y., and in the Missouri Botanical Garden it is left in the open ground the year round, but is given a mulching of pine needles over winter.

It is both surprising and gratifying to learn that the beautiful *C. ornatum* (*C. Moorei* is its *correct* name) is so hardy, and suggests that very likely several other species of this splendid genus of the Amaryllis family may prove equally so under like conditions. But in experimenting with *crinum* bulbs in the open ground it will certainly be wisest to give them ample protection over winter in the shape of a heavy mulching or covering of some kind, both for the purpose of keeping out frost to as great an extent as possible and to prevent repeated freezings and thawings of the soil. As Mrs. La Mance suggests, a warm, protected location should be chosen in which to plant the bulbs; and the narrow border along the foundation or underpinning of the south or east side of the house suggests itself as being especially suitable. In localities where the houses are "banked" over winter a very efficient protection would be assured; under just such conditions I have known gladiolus bulbs to survive the winter in the State of Maine. I would also suggest deep planting of the *crinum* bulbs—having at least five or six inches of soil above the top of the bulb proper—the long necks of the bulbs rendering this feasible.

In localities where there is much rain during the winter there might be danger of water getting into the heart of the bulbs and decay following. To prevent this, just before the ground freezes, in the late fall, place a considerable heap of leaves, hay or straw over the crown of the bulb or bulbs, over this turn a tight box bottom up, and mound soil all around and over the box. Evergreen boughs, strawy horse manure, or trash of some sort piled over the mound would still further insure the safety of the bulbs. This form of winter protection is highly commendable for lilies of all kinds, as they will repay in added luxuriance and floriferousness for this extra attention.

Mrs. La Mance's article contains a valuable hint to all who grow or wish to grow *crinums*

in pots. They are true children of the sun, and during their growing season they enjoy a hot situation and plenty of water. In the spring the pots might be plunged in such a situation as she describes—or as recommended in this article—and I have no doubt nearly if not quite as good results would be obtained. In the fall, before heavy frosts, lift the pots and remove to the shelter of the veranda or house and allow the bulbs and foliage to slowly ripen up by gradually withholding water. When time to store away for the winter the soil should be nearly but not quite dry and should be kept in that condition until spring—just enough moisture in it to keep the large fleshy roots from shriveling up and dying. A warm, dry closet is preferable to a damp, dark cellar in which to winter them. Like most members of the amaryllis family, the *crinums* bloom best when somewhat pot-bound.

The *crinums* thrive to perfection in the open ground in Florida, practically taking care of themselves after they are once planted, forming immense clumps and blooming magnificently. I have a large number of varieties growing on my place in Florida, and may some time tell the readers of the MAGAZINE about them.

WALTER N. PIKE.

Floral Park, N. Y.

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CHRISTMAS FLOWER TRADE.

Reports from the larger cities show that the Christmas trade was the best on record.

In nearly all the cities flowering plants took the lead, begonia *Gloire de Lorraine*, poinsettias and red azaleas being the favorites. Palms and Boston ferns sold well, but the demand was not as great for them as for flowering plants. In cut flowers, gay and lively colors were most called for, red and dark pink carnations selling best. White flowers were not much in demand. American Beauty roses brought good prices; other varieties were low

In New York violets and lily of the valley overstocked the market and bulbous plants did not sell well.

In Philadelphia, fine orchids, American Beauty roses and tea roses were scarce.

In Chicago, wreaths of magnolia leaves with bunches of red berries and red ribbons brought \$5.00 each. Black alder or winterberry was very plentiful on the streets and sold well. Pot covers and baskets of white birch bark made a hit, being new and odd.

In all cities the demand for green goods was unusually large, especially for holly. The sup-

ply was plentiful, but the stock was not in all cases first class.

Mistletoe was scarce everywhere and not very good in quality, but, like holly, everybody wanted it.

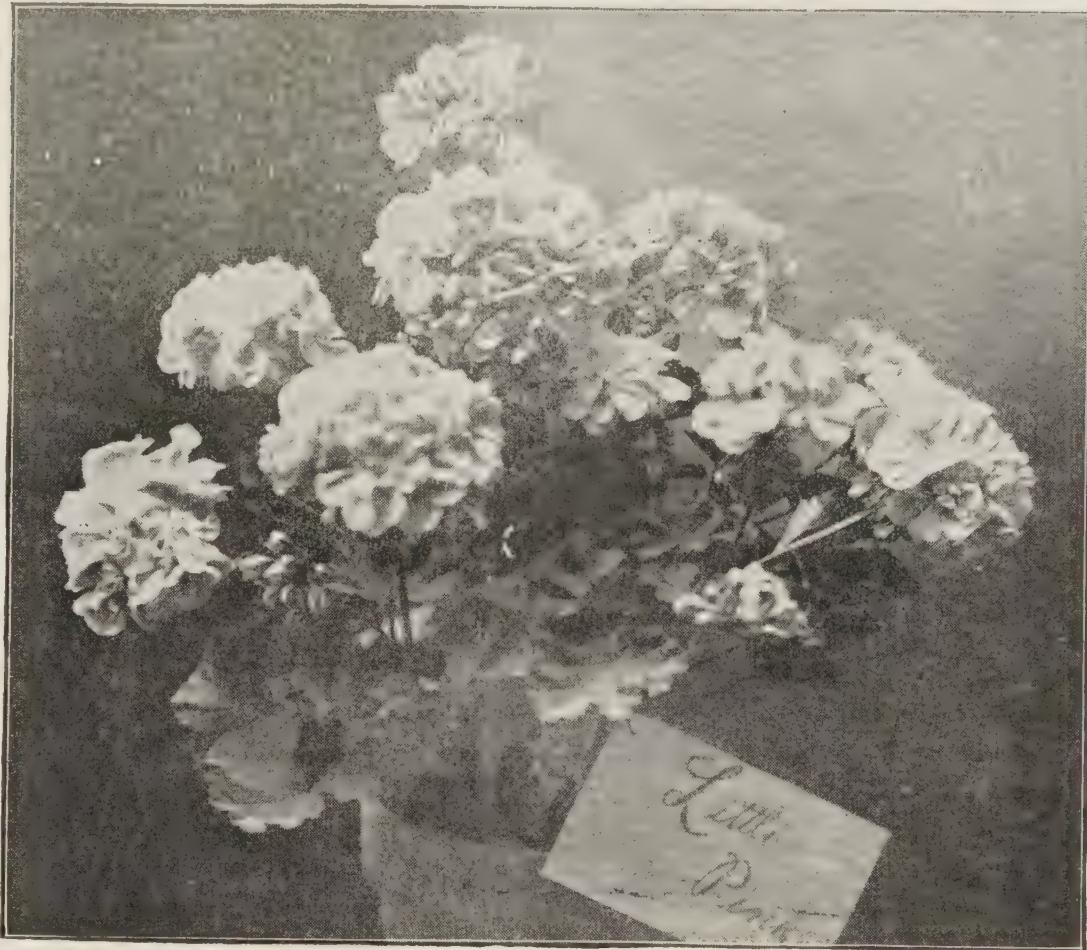
Begonia *Gloire de Lorraine* proved a great favorite. As a dinner-table plant it cannot be excelled.

F. B.

TREE ROSES.

An article on "Crimson Rambler in Tree Form," published in December number of this magazine, calls to mind that my experience in growing roses in this way might be of interest to other readers.

Varieties thus far tried are Crimson Rambler, Champion of the World, and Marechal



GERANIUM—LITTLE PINK

GERANIUM—LITTLE PINK.

This variety, which may be called a double pink Mars, is a seedling from Mars crossed by Asa Gray. It is a very dwarf, bushy, compact and free flowering plant, not exceeding over four to six inches in height. It is excellent for bedding or as a pot plant. Its trusses of double, bright pink blooms, stand erect from three to six inches above the foliage. Its profusion of bloom is plainly seen in the engraving which was prepared from a photograph of a four-inch pot plant,

The plant originated as a sport from Mars, with Mr. W. E. Hall, Clyde, Ohio, who has introduced it to the trade.

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CARNATIONS like a rather cool temperature.

Neil. At present I have in my garden a Champion of the World which, when in bloom, much resembles engraving accompanying said article, and is a remarkably fine garden ornament.

The Marechal Neil is especially adapted to top-working, for several reasons; one of which is that it does not do well here on its own roots, and another is that it can be very easily protected by simply bending to the ground and covering.

For stocks I use the native rose which grows here in the woods. This wild rose can be had at almost any height. It is extraordinarily vigorous and hardy as the oaks, the tops of which it sometimes reaches.

EDWIN H. RIEHL.

Alton, Ill.

NOTES AND SUGGESTIONS,

PAMPAS GRASS.—Some years ago Mrs. Lora La Mance wrote of her great success with the pampas grass. Now, in the last number she says the mercury last winter went down to 16° or 18° below zero, and is likely to sink to 10° or 12° almost any year. Does she mean to say that the pampas grass will endure all this cold? If so, I will set it next spring, for I seldom see any lower mercury.

I read in Burpee's catalogue that an old barrel turned over a pampas root will protect it. Does anyone know about this?

LOVAGE OR SMELLAGE.—A great plant of the parsnip family (*Umbelliferæ*), often seen about old places, and probably cultivated at one time. It grows six or more feet high and makes a great show with its flowers and seeds. Here is a question in an old MAGAZINE as to its uses; the reply is that it must have been set for its bold appearance, for it has no use. It is not clear whether lovage in this case is of the genus *Archangelica* or *Ligusticum*. If the former, and it probably is, it was used for celery at one time, being blanched in the same way, and the tender stalks are candied by confectioners, while the seed and leaves are used in domestic medicine (Lindley). It seems to be cultivated in England. I was removing and hauling away the banking of buckwheat straw placed to secure a neighbor's cellar last year, and the young stalks of smellage, a foot or more high, which had started to grow under the straw, were blanched as nicely as any celery. It did not occur to me to taste them—I have not much liking for celery anyway, a sunflower stalk would suit me as well—but you who like it ought to consider that here is a celery producing plant that can be used in May or later, when ordinary celery cannot be had. The flavor—but you will have to discover that for yourself; it may be better than the regulation sort for aught I know. A variety of fennel called finochio—an Italian word, I believe—is also used as celery by the Italians, and may be grown by anybody. It is a perennial, but not being hardy it often dies in winter, so that many suppose it to be annual. I am not sure whether it is the sweet fennel sold by the seedsman or not. Celery, smellage and fennel all have the odor and flavor of anise, though with a difference. The root and green seeds of the sweet cicely (*Osmorhiza brevistylis*) are very much the same, a native plant often eaten and sometimes cultivated.

CROCUSES.—We all know and love the hardy

early flowering crocus, *C. vernus*, but it is curious that we see and hear so little of its congeners, which are numerous and said to be beautiful. They are mostly natives of Southern and Eastern Europe, Asia Minor, etc. *Crocus vernus*, *C. versicolor*, *C. imperati*, *C. reticulatus*, *C. aureus* (*lagenaeflorus*) with its varieties, are spring flowering species. Of autumn blooming sorts the most beautiful are *C. speciosus*, *C. pulchellus*, *C. sativus*, *C. Cartwrightianus*, *C. cancellatus*, *C. Boryi*, *C. byzantinus* and *C. longiflorus* (*odoratus*). *Crocus sativus*, grown for making saffron, is also an autumn flower. There is a town in England called Saffron Walden, the saffron industry having given a name to the village; but the best saffron comes from Spain. The above list is not the whole; it is merely the best, and our seedsmen ought to give us a chance at all or some of them. The crocuses are of the iris family (*Iridaceæ*).

What people hereabout call the autumn crocus is a species of *Colchium* belonging to *Melanthaceæ*, and very different from any crocus.

E. S. GILBERT.

Canaseraga, N. Y.

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OTAHEITE AND OONSHIU ORANGES.

The MAGAZINE for October contains a letter from H. E. Amoore, of Kobe, Japan, about the Otaheite and Oonshiu or Unshiu oranges, with an editorial note. Mr. Amoore asks if it is not a fact that the Oonshiu is sometimes mistaken for the Otaheite, and the editor says, "There is probably some similarity existing between the varieties here in question." The only similarity existing between these two plants is that of outward appearance. In reality they are as far apart botanically as two plants belonging to the same genus can be, as the Otaheite is a lemon, while the Oonshiu is one of the mandarin or "kid glove" oranges. The editor also says it is not unlikely that the fruit of the Oonshiu may be of better quality than that of the Otaheite. Of this there is no question, for the fruit of the Otaheite is absolutely worthless for eating, while that of the Oonshiu is sweet and delicious.

It used to be generally stated in catalogue descriptions of the Otaheite that its fruit was worthless, but late years many florists have forgotten to say that it is a purely ornamental plant, while some have actually stated that the fruit is sweet and good. If there was no other orange in the world, the fruit of the Otaheite

might possibly be considered better than no orange at all. As an ornamental plant—foliage, flowers and fruit—the Otaheite is worthy of all the praise that has been bestowed upon it. But now that the delicious edible-fruited varieties, including the Oonshiu and the wonderful little Kumquat or Chinese Gooseberry orange, are to be had dwarfed (by budding or grafting) on the Trifoliata stock, it seems hardly worth while to give the Otaheite space in window or conservatory. These dwarfed edible varieties are just as easy as the Otaheite to manage, even more floriferous if possible, much more pleasing and symmetrical in growth, and have the added advantage of producing delicious flavored fruit.

The Oonshiu, Unshiu, or Kii seedless orange was brought to Florida from Japan some years ago by Gen. Van Valkenburg, a former resident of that country. It is a native of the Island of Kiusiu, Japan, and by request of Mrs.

Gen. Van Valkenburg was named Satsuma, after one of the chief cities of that island. In Florida it is almost universally known as Satsuma, and is the favorite and most valuable early orange of the state, being ready for market in September and October, while by the last of November it has lost its juices and high flavor which make it so exceptionally delicious earlier in the season. It is also one of the hardiest of all oranges, 20° above zero not injuring it when budded or grafted on Trifoliata and dormant. On the contrary, the Otaheite will not stand much frost without suffering serious injury, which is a characteristic of the lemons. A few years since a lady in Virginia reported that her Satsuma orange dwarfed on Trifoliata stock ripened forty-two full-sized fruits the second year after she obtained it, and while it was confined to the limits of an eight-inch pot.

Floral Park, N. Y. WALTER N. PIKE.

FROM LAST SEASON'S

WHAT the chrysanthemum is among late blooming greenhouse plants, that the aster and the ten-week stock are among the annuals. We had early frosts which killed most garden flowers, but these two held their own against the enemy, and were in full bloom up to the middle of October. Indeed, the stock showed here and there a stalk of bloom when the first snow came. We ought to grow more of these flowers and keep the garden gay as long as possible. The aster is our best annual in many respects. It is a most profuse bloomer, is showy enough to suit all lovers of rich and brilliant color, and is quite the rival of the chrysanthemum in form and beauty of flower.

I wonder how many flower-lovers know what a good thing the stock is for winter use in the house? Last year I found some strong seedling plants in the garden, in September. I suppose they came from seed scattered there accidentally, as the spring-sown plants had not ripened any. The young plants looked so vigorous and healthy that it seemed a pity to leave them to the certain destruction which awaited them. I potted half a dozen of them. I gave them a cool window to grow in after they were brought into the house in November. Along about the holiday time they

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began to bloom. Three of the five proved to be single; the others were white, and so delightfully fragrant that they filled the room with an odor as sweet as that of the carnation. When all the flowers on a spike had developed, the branch was cut back, and soon new branches would start, and these in time produced flowers. During the entire winter the plants continued in bloom. This season I shall grow more of them for greenhouse use.

The Climbing Bittersweet vine,—*Celastrus scandens* the catalogues have it,—is one of our best native climbing plants. It is of extremely rapid growth. It is never attacked by worms or insects. Its foliage is bright and pleasing and there is a great deal of it. It is a most adventurous plant, and will climb to the highest part of the house if there is anything it can find to twist itself around. It is as hardy as a plant can well be. All these things are in its favor. But the strong point of the vine is its fruit; this remains on the branches all winter, and the red and orange clusters are quite as ornamental as flowers. Seen against a background of snow they are wonderfully vivid and pleasing. The plant ought to be more extensively grown.

EBEN E. REXFORD.

THE COLLEGE AND BOOK FARMING.

PERSONS are still asking for examples of what the colleges and experiment stations have done for the farmer. The question itself indicates that the questioner is ignorant of the educational field. It is easy enough to specify items by the score in which they have aided the farmer to better till his land and manage his affairs. The real value of these institutions is seen, however, in the general uplift of the agricultural communities. The tone of farming can never rise until the tone of the farmer rises. There is more widespread intellectual interest in agriculture now than ever before. The farmer feels himself to be the equal of other men; he is able to grasp the principles which underlie his business. His horizon and ideas of living have broadened immensely. All education strikes first at the individual, and the individual is finally reflected in his business. The discussions in which farmers engage at the present time are such as would have been entirely beyond him a generation ago; in fact, many of them would have been beyond the foremost of the agricultural teachers. The mental horizon of the farmer has enlarged so immensely that in some things there is really little comparison between the intellectual equipment of the last generation and this.

Yet it is true that many people have not yet got over the old notion that the agricultural college or experiment station should do their thinking and their farming for them. They seem to think that they have only to ask the question in order to get a recipe, as they would get a box of pills if a physician wrote a prescription. The fact is that the conditions of every farm are so peculiar that a man who does not live on that farm cannot expect to answer the questions of detail concerning it. The teacher can set the man to thinking; he can set him right on important questions; he can teach him how to solve his problems for himself. It would be a sorry day for agriculture if some one were to solve the farmer's

problems for him, for thereby the farmer would lose intellectual interest in his business; and when he loses intellectual interest, he loses all enthusiasm. Every farm should be an experiment station, and the farmer should be the director thereof.

We have heard so much said against book farming that we have come to feel that the age of book farming is past. The fact is, that book farming is coming. The old type of book farming was unsatisfactory because it had two faults: First, the book itself was usually a record of mere practice; second, the farmer tried to apply it literally. Books telling just how to do a thing are called practical books, but they are really the most unpractical books. How to do a thing depends upon the conditions. It will differ with every soil or climate or personal ideal or other circumstance. What a book should teach is why a thing should be done. It is then easy for the farmer to determine how. If, for example, a farmer understands why he tills, and the general principles of securing the conditions which he wants in his soil, he can select the various tools and plan his work so that those conditions may be secured. The experiment station officer or the college teacher cannot always tell the man what conditions he should secure; the man himself should determine that, and then the teaching which he receives should enable him to set to work to reach those conditions. A book of principles is one which applies to a wide area, and not to the particular farm or garden in which the author worked. When a farmer takes up an agricultural book, it should be in the same spirit in which the professional man takes one up—to obtain suggestions and new ideas, and not necessarily to apply the various statements exactly and literally as they are set down. The farmer who tries to pattern after somebody else is a trailer. He has no motive power of his own.

L. H. BAILEY.



THE CALIFORNIA PITCHER PLANT.

Darlingtonia Californica is one of the most interesting of all pitcher plants, and is considered a great curiosity. It grows at such a considerable altitude in the mountains of California that one would expect it to be hardy in our Eastern and Northern States. Nevertheless, whenever it is grown in the East or North it is nearly always cultivated under glass. Few botanical gardens or lovers of pitcher plants like to be without this interesting insectivorous plant. Mr. Edward Gillett, of Southwick, Mass., is able to grow the Darlingtonia out of doors the year round. Mr. Gillett thus describes his treatment of the plant:

I have tried growing Darlingtonia Californica in various situations by the side of a lake and in marshy places with but very little success. It would seem to do fairly well for a time, but would not winter even when mulched with care. At last I planted it on the south side of a high wall or dam built across a ravine, the soil being a black sandy loam, where it is constantly moistened with water impregnated with iron, and the soil is covered with sphagnum moss. Here seemed to be the right conditions for its successful growth, being sheltered by overhanging trees all the hottest part of the day and sheltered from the west by a bank the height of the wall. Here it has formed fine large pitchers with flower stalks over a foot high. It had a slight protection in fall of sphagnum moss, and the leaves came out in spring in good, healthy condition.

The conditions mentioned by Mr. Gillett are very unusual, but it is possible that some reader of VICK'S MAGAZINE may have similar ones, and by the aid of Mr. Gillett's notes may be able to cultivate this interesting plant, which is truly one of the wonders of the vegetable kingdom.

WILHELM MILLER.

DAHLIA NOTES.

I notice in November and December numbers blue and purple dahlias are mentioned. I have some very fine pink. One of the best is A. D. Livoni. In regard to blue ones, would say the Pride of Virginia is a variegated one, blue and white. Some of the blooms have but a few white ones in them, some are nearly half white and blue. What I am trying for is one red, white and blue. I am glad to see so much interest taken the past few years in the dahlia. To my mind there is no autumn flower its equal. The Pride of Richmond is a variegated variety of maroon and white. Of all dahlias this, to my mind, is the best—long stems and such rich colors. "American Flag," Dandy, Orange King, Pluton, Black Prince, Duchess of Cambridge, Frank Smith, Henry Patrick, Uncertainty, Lyndhurst, King of Cactus, Ethel, Miss Barry, Fern Leaf Beauty, Ruby Queen, Carol; these varieties are my

favorites, and with such a collection any one can and will be proud of them. C. W. Bruton is a very fine yellow, but does not produce as many flowers as I like. The dahlia prefers a rich, moist soil, and here in Virginia I plant it out about the middle of May to the first of June. The only enemy I am troubled with is a long black beetle. He works on some varieties worse than others, usually beginning the last of August and September. I kill the insect when I can. As the season advances he leaves.

A great many who raise the dahlia allow the plants to grow too tall and spindling. My way is to keep them cut back, and then they will throw out laterals and not fall over so much. Pride of Richmond and Fern Leaf Beauty generally stand erect. The best fertilizers I find for them is good rotten manure, bone dust and wood ashes, and good cultivation. I plant in rows six feet apart and four feet in the row, and work them just as long as I can.

M. T. THOMPSON.

Rio Vista, Va.

OLD FRIENDS IN NEW PLACES.

Cannas have been so successfully used for hedges, for masses of foliage in landscape gardening, and to hide unsightly walls and fences, that they are among the tried and true friends of the amateur florist.

I have found them to be very satisfactory for indoor blooming in winter.

They are comparatively hardy, easy to care for, and very restful to look upon when the outside landscape is bleak and bare.

The Madame Crozy, Alphonse Bouvier and the orchid varieties are most satisfactory for house plants.

Just before time for the first frost, is the time for potting. Use a ten or twelve-inch pot, and disturb the roots as little as possible in moving. The soil should be rich, with a little sand to hold moisture. Take up the entire cluster of bulbs and rootlets that are together, and, if necessary, cut off any tall foliage. Keep the soil in the pot damp but not wet, and set the plant in the sunshine as often as possible.

Frequently the blooming is not at all interrupted by the change.

Potting dwarfs the foliage, and the blooms are correspondingly larger and more profuse.

The leaves should be carefully dusted every few days that they may breathe, and so not dry up, and if the soil becomes impoverished use

a little bone meal as fertilizer. The plants themselves, in their green, crisp freshness, are as pretty as palms, besides the compensation of the blossoms.

I know of an invalid who has several cannas in her sitting room, and she finds a continual pleasure in watching the green leaf banners unfurl and the yellow and scarlet blossoms burst into gorgeous beauty. M. QUINN.

Atlanta, Ga.

DECORATIVE GRASSES.

To those who have not yet made their acquaintance many of the decorative grasses are a revelation. Planted singly or in groups they are quite effective. One of the best is unquestionably *Gynerium argentum*, also known as pampas-grass, which thrives especially in the southwest of our country and is not hardy east of the Rockies. But it can be raised with protection as far north as Maine, requiring only a litter of straw in the winter time. Its silky silver-white plumes, which it bears in the summer, are very showy. It does well in dry situations, a fact that commends it especially to the folk of the arid belt.

The pampas—or prairie-grass is also of great utility in the decoration of lawns, although it is not often used for that purpose except in California. Its winter protection should not be delayed over-long as it is exceedingly sensitive to cold. Before the severe frosts set in in November, it should be covered. A barrel or an old basket will do very well for this purpose.

Erianthus Ravennæ is another decorative grass of great value in the ornamentation of the garden. Like the above it is a perennial and requires several years to reach perfection, but it does not need as much protection against Jack Frost. It lacks the plumes of the pampas-grass but, as though nature wanted to make up for this, its foliage is far more attractive.

Gymnothrix latifolia is not as well known in the United States as it should be. It is sown under glass in February and transplanted in May, that is to say out of doors. It develops rapidly, and until September attains considerable height, but is killed by the first frost that comes along. It resembles the bamboo, and its leaves do not look unlike that of corn. It can easily be wintered in the cellar or pit and obtains great size with age.

Bambusa aurea is another plant that should be more common in our gardens. It may be

wintered in the open ground with slight protection and looks very fine with its clusters of delicate leaves and golden hued stalks.

Eulalia is a desirable grass for the open lawn or border of shrubbery.

But few of the decorative grasses can here be mentioned, but two of them, *Arundo Donax* and *Papyrus antiquorum*, cannot be passed over.

The former attains a height of six feet and is a perennial. Its golden yellow striped leaves, borne on a strong stalk, are beautiful. The papyrus furnished the ancient Egyptians with a substitute for writing paper and is therefore of historical as well as floricultural interest. It is an odd looking plant and bears blossoms at the end of the long stems that markedly resemble the peculiar hair of the foot-ball player. There is only one drawback to the cultivation of this plant; it is difficult to keep it over winter. For this reason those who do not possess a conservatory had better entrust it to a florist for hibernation; they will never rue the expense.

DR. HUGO ERICKSON.

SALPIGLOSSIS SINUATA,

With Colored Plate.

The Salpiglossis is one of the most beautiful of the garden annuals, particularly valuable as a cut flower. The plant itself has a thin, long, branching stem, thinly clothed with small narrow leaves, consequently of poor appearance standing singly. It should be grown in a mass on the border. It is a native of Chili, S. A., and has been in cultivation many years, during which time it has increased in beauty by the multiplication of handsomely marked varieties. The seeds are fine, about like poppy seeds, and in this climate can be sowed, out-of-doors, from the first to the last of May, or they may be brought forward a little earlier in a cold-frame. The seed should be sown in a fine, mellow soil and covered only about a quarter of an inch in depth. The plants bloom all through the summer, and there is no more satisfactory flower for cutting for room and table decoration. Every flower garden should have a good supply of it.

NEW VARIETY OF SCARLET SALVIA.

Henderson & Co., offer seeds of a Scarlet Salvia called "Scarlet Dragoon." Flowers are said to be twice as large as those of *S. Splendens*. It is, presumably, the European novelty sent out as *Salvia splendens grandiflora*.

NEW CARNATIONS.

Mr. Albert M. Herr, Secretary of the American Carnation Society, read a paper before the Philadelphia Florists' Club, January 2d, entitled, "Latest Facts about New Carnations."

In relation to two new varieties he made the following statements: "Among real new sorts I am also at some disadvantage, although I have seen No. 666 and wished I were the owner of the stock, not alone on account of its size and form, nor the price it brings as a cut flower, the latter being a novelty price that will drop down to normal figures as soon as there are more plants to cut from, but on account of its apparent good habits as a grower, and the fact that it seems as good a bloomer as many varieties one-third its size. * * * The owners of No. 666 know a good thing when they see it, and will no doubt hold on to it a few years before letting it get out among growers. They may well hold on to it, as it seems almost beyond the limits of the carnation to get one out that will overtop it in size and form.

Governor Roosevelt, the new crimson or maroon, is in about the same position in its class; and is so good that it can easily be held back a few years, without fear of a better one coming out to take its place.

This is giving these new varieties about as high commendation as language will admit, and undoubtedly they are very superior. The originator of No. 666 is F. W. Miles, of Plainfield, N. J., and he has sold the entire stock to Dailedouze Bros., of Flatbush, N. Y. The color of this variety is a blush white.

THE MINISTRY OF FLOWERS.

Children love flowers, and with steady cultivation in the home and in the school, that love will develop into one of the most useful as well as delightful resources a human being can possess, bringing fresh interest, knowledge and pleasure, with each year, and no end of blessing and enjoyment to those around us. Through what other medium can we so swiftly and silently express so much of the joy and sorrow of the heart? The mission of flowers is a far higher one than many suspect.

There is a power in them that can bring a look of joy into a sufferer's face. Would that everyone who has never tried it might seek the new experience lying in that direction.

Among my house plants there are some that almost seem sacred to me; a lovely rose-

bush and a crimson gloxinia. Once, in blooming time, I carried them into a sick-room to cheer the last days of life's journey, of a young friend. Two years have glided on since that young soul passed "Beyond the smiling and the weeping," and still other hearts and other eyes are gladdened by the sweet bloom of the same plants.

The question is sometimes asked, "Isn't it lots of work to care for a flower garden, and, after all, they so quickly fade"? To the true flower-lover, as to the true mother, with all the painstaking labor of love, there is so much of



CRIMSON RAMBLER ROSE

joy mixed in that the work never drops into mere drudgery.

"Affection never was wasted;
If it enrich not the heart of another,
Its waters, returning back to their springs,
Like the rain, shall fill them full of refreshment.
That which the fountain sends forth,
Returns again to the fountain."

MARY MOORE THURLOW.

Cutler, Maine.

FINE SPECIMEN OF CRIMSON RAMBLER

The engraving of Crimson Rambler on this page shows a handsome specimen three years of age, as it appeared last summer on the grounds of Mr. E. W. Vest, of Tacoma, Washington. The photograph was sent to us by Mr. Frank B. Cole, of the same place. This rose will cover a large space with blooming wood if allowed to develop itself.

ILEX VERTICILLATA.

Ilex verticillata, commonly called black alder or winterberry, is one of the most attractive of our bright-berried, native shrubs. It grows quite abundantly in many localities in this vicinity and is deserving of being extensively cultivated, but I do not remember to have seen it on any grounds except at Highland Park in this city.

The berries are of the most brilliant scarlet, rather small, but clustered thickly on the branches. They remain bright and fresh on the shrub nearly all winter, and will also retain their color for a long time when used for indoor decoration.

The past Christmas season, for the first time, I noticed it offered for sale at the florists and on the street, and trade reports from other cities speak of it as being in demand and selling well, particularly in Chicago. It is a worthy rival of the holly, working in beautifully with Christmas greens.

F. B.

PANSIES, POPPIES, JAPANESE MORNING GLORIES.

There are flowers and flowers! From first to last the surface of Mother Earth is all aglow with ten thousand shades of color that is the despair of the deftest painter that ever held the brush. There are petals of such rich and delicate texture as are barely able to withstand the rough breath of the early morning zephyr. It is roughness to them to stir even the vine or branch that bears them aloft. Some plants commend themselves to the nature-lover because of their fragrance. Others base their plea for recognition simply from the possession of beauty of color and delicacy of blossom.

Prominent in such qualities we find the lovely poppies and the beautiful morning glories.

How a small garden or limited area can be royally beautified with the aid only of these three well known annuals is the subject of these few thoughts.

It is only in the past few years that the plants of this beautiful trio have been brought to that perfection that places them high in esteem for all decorative purposes. But the best enjoyment of the three is to be realized when, flecked with dew, their delicate blossoms greet the newly risen orb of day. Later on the glory and the poppy blossoms may resent somewhat the effect of his rays upon their delicate cheeks, but the pansy recks little of this.

For a beauty spot in some corner of the

garden, supply a rambling trellis made of light poies for supports, and to each separate support award a particular shade of color of the morning glory. It is best to procure a packet of seeds of each separate color in order to regulate the necessary alternation of color. Among the glory trellis have hills of poppy duly varied as to color. Then skirting the whole have one, two or three circular rows of pansies. By procuring a paper of separate colors, it is easy enough, with a little care to procure a perfect alternation of colors with the pansies as well as with the other two. And, as the poet says, when the scene "shall finally break into its preconceived display, each for itself, and all as with one voice conspiring, may attest his bright design," a mass of coloring hard to imitate will certainly be the reward of such effort.

A ROSE REMINISCENCE.

"Now, that is certainly something worth while," and a visitor's admiring glances fell upon the big, climbing rose in my aunt's dining room.

It certainly did look "worth while" that mid-winter day, growing in a water pail and reaching from floor to ceiling, its dark, luxuriant foliage well sprinkled with large, glowing, pink blossoms. Being of the tender class, it could not be left to the doubtful mercies of a Wisconsin winter out-of-doors, so it was grown and treated with especial reference to its winter usefulness. Nothing could be more beautiful or delightful, with nature asleep outside in its wintry raiment, than this bit of brightness with its companion, a common red everbloomer which knew no other name than "the monthly rose."

They were wonderful to my young eyes when I visited my flower-loving aunt, where, by the way, I received my first introduction to "Vick's." It was long years ago, before the existence of VICK'S MAGAZINE, and when I came, the carefully hoarded "Guides" would be brought out and revelled in for long hours. The love of flowers made us companions, notwithstanding the disparity of years.

Upon one of these visits, late in summer, I found the glorious roses abandoned to an out-of-the-way corner where the sun never came, dry, with withering leaves, and looking altogether so forlorn and neglected that I exclaimed in dismay: "Aunt Sadie, you are killing your lovely roses."

"No, child, I'm only drying them up and giving them a rest now so they will bloom for me next winter. That is the secret of our winter flowers."

Later I possessed a plant of the beautiful climber. To my surprise the blossoms were nearly white, only tinted pink.

"Why are not my roses pink like yours," I inquired.

"Because you have not put wood soot at the roots," auntie replied, and I have since learned by axperience that this will sometimes so change and deepen the color of a flower as to almost hide its identity.

LILLIE SHELDON.

BIRDS BENEFICIAL AND OTHERWISE.

On this subject Mr. Leonard Coates recently read an excellent paper at the University Farmers' Institute at Napa, California. Here are a few extracts:

WHY BIRDS ARE KILLED.—It is estimated that the value of the farming lands of the United States reaches the enormous sum of thirteen billion dollars; insects and rodents are said to destroy products annually to the amount of two hundred million dollars. Birds are killed for two purposes; for food and for millinery ornaments. The millinery and lace trade represents an invested capital of twenty-three million dollars,—but a very small sum compared with the farming interests. For food, but a small percentage of birds are killed, and mostly game birds, so that the destruction of birds is due mainly to fashion's demand for the plumage for purposes of ornament, to their wanton destruction by those who simply have the desire to kill, and to the mistaken idea among many farmers and their boys that birds are their natural enemies.

Mr. William Dutcher, treasurer of the American Ornithologists' Union, says: "The birds protect the farmer; they work for him more faithfully and continuously than any other helper he can get; let the farmer recognize this, and in turn let him protect the birds. It would be a wise investment in actual dollars and cents for every farmers' club and institute in this land to employ a naturalist to teach the names of the birds about them and the part that each one takes in the preservation of nature's balance. I believe that when the farmers, their wives and children once become well acquainted with the good work the birds do in the meadows and orchards, the gardens and forests, it will be dangerous for any one to destroy one of the feathered helpers. * * * We destroy the hawks, and for the value of an occasional chicken we have to put up with linnets in such numbers that a small cherry crop means none for us, the birds taking all.

It has been shown that one pair of robins will bring to their brood in one season more than 3000 worms—cut-worms and others. The robin alone saves to the farmers of the United States more than enough to compensate him for injury done by all other birds together. Thrushes and larks feed in much the same way.

The woodpecker is instrumental to a great extent in preserving valuable timber, for he is ever on the lookout for wood-boring beetles, wood ants and other insects which bore into trees. The sap-sucker is condemned because of the injury he sometimes inflicts upon an apple tree, but, even then, the good he does counterbalances this lesser evil. When any of the birds are seen to be particularly active and busy, and present in large numbers, closer observation will reveal the fact that some noxious insect is present in great numbers.

KLONDYKE COSMOS.

The seed of this yellow flowered cosmos, which was sown here last spring, didn't produce any summer flowering plants. During the cold weather of September and October the growth was exceedingly rapid, but the frost killed the plants before the first buds were half expanded. Some plants which were lifted, and one or two others which were grown in pots and shifted into tubs, are now gorgeous spectacles; one of them is ten feet high and six feet through, with thousands of blooms of a deep, orange yellow. It is remarkable how easily a large plant can be lifted from the open border and flowered indoor.—*G. W. O., Washington, D. C., in Florists' Exchange.*

STATE LAW FOR TREE PLANTING.

New Jersey has a shade tree law. This law authorizes the planting, under the direction of a commission, of street trees, twenty-four feet apart, where no trees already exist. The *Orange Chronicle* announces that, under this law, was begun, in November last, the planting in Passaic of 4000 shade trees. The journal mentioned observes that "the indifference of the majority of private owners to this important duty of citizenship fully justifies the putting of this law into active operation here and everywhere throughout the State."

"ROUGH RIDER" STRAWBERRY.

A seedling strawberry raised by Mr. Charles Learned, at Sandy Pond, near Pulaski, N. Y., has proved to have valuable market qualities. It ripens very late, coming in after the usual crop is all gone. It is a stamine, or self-fertilizing plant, a strong grower and heavy cropper, berry large, dark red, very firm. It competes in the New York and Boston markets with fruits from New Brunswick and Nova Scotia.

THE LEOPARD PLANT.

I notice the discussion in regard to the hardness of the Leopard plant, *Farfugium grande*, in the January issue, page 120. We leave the plants all the year in the open border protected after Christmas. It is as hardy as hollyhock. The foliage was not frozen this year at Christmas time.

H. EICHOLZ.

Waynesboro, Pa.

LILIES OF THE VALLEY are easily forced.



NATURE'S STUDIES FOR YOUNG PEOPLE.

*Go forth under the open sky and list to
Nature's teachings.* —Bryant.

LAST YEAR'S NESTS.

"Today I found a little empty nest,
Fashioned with rarest and most patient skill.
A few soft, tiny feathers lingered still
Where once reposed the loving mother's breast.
But she no more will come from weary quest
With food for every tender open bill;
No more her love their every want can fill—
They wander far, who once found here their rest."

Today a call is issued for the older Volunteers. We are to have a march, a forced one perhaps, and quite on the double-quick, so that we can overcome the desperate advances of wind and cold, and capture without loss the little log cabins which we go to seek.

The younger Volunteers can see the spoils of war when we come home laden, and learn enough about these frail houses to help protect them in the spring from the cruel hand which would make them desolate.

These nests which we gather have fulfilled their mission, and we may use them for our collection without wronging the builder.

If you wanted to build a house what would you do?

Could you build it yourself strong enough to stand wind and weather? Could you make it beautiful and warm, and just the right size for your little family? I do not think so.

First, you would have to go to an architect and ask him to draw the plans. Then you would have to engage a mason to lay the foundations, and a carpenter to build the house, and plasterers to make the ceilings and walls. This is what a man would have to do. But a bird! It is all so simple for a bird.

She looks about, chooses some twigs of the right size, in some spot that seems suitable, and then, with the help of her mate, she builds the nest.

This is the best season of the year to study nests, for the simple reason that you can see them and secure them without destroying a home or alarming the bird. Many birds will desert a nest that has been handled even if there are eggs in it, and surely none of us wish them to do that.

Robin's nest is easily told. A large clump of twigs loosely put together, lined with mud.

which the mother-bird smooths into shape with her soft breast.

Sometimes the English sparrows, who are always on the lookout for strange ideas in nests, take an old robin's nest and by adding a ragged collection of grass and sticks rear a family in one of last year's nests. I have known a sparrow to take refuge in an old nest during furious snow storms and biting winter winds, and, I think, he found the nest so cozy during the winter that he induced his mate to use it the following summer.

The cat-bird's nest is easily told also. Quite loosely put together, it lacks the mud that robin uses, but is quite as plainly marked, for she thinks paper and rags make such a cozy lining for the little cat-birds.

Have you ever found in your walks a dear little nest on or near the ground, small, cup-like, and so cleverly lined with hair, woven round and round? This is built by the chipping sparrow, or hair-bird, so called by its use of hair in lining its nest. How many trips the parent birds must make to farm-yards and stables before they can carry home enough hairs for their purpose.



NEST OF BALTIMORE ORIOLE

All the Volunteers must know the pretty nest of the Baltimore oriole, fire-bird, or hang-bird.

This mother thinks a cradle the best for her babies, but books would tell you that the nest is "pensile." Do you know what this means? The orioles are beautiful builders, really weavers. If you find a damaged nest take it to pieces, and see how bits of string, soft grass and hair are threaded in and out. These



NEST OF RED-EYED VIREO

nests take so long to build that the male bird helps too, bringing material for the patient weaver inside. The nest is made almost like felt, with down from plants, wool and catkins. It is sometimes ten inches long.

Do not think you must go to the woods to find nests; you will be more likely to find them nearer home. Most birds prefer village streets, lawns, shrubberies, orchards, and city parks, where food and water are easily procured.

The vireos build some of the prettiest nests we can find. The picture of the nest with the withered leaves is that of the red-eyed vireo. It was found only about four feet from the ground at the edge of a wood near a large city. Four little birds had their home there, were brought up in it, taught to fly, to sing, to fend for themselves, and then led away with others of their kind to the warm South to spend the winter.

The four kinds of vireos which are common with us have fancies for queer materials. They use quantities of spider's web, silk spun by the caterpillar, the paper of the wasp's nest, and this very red-eyed vireo's nest is fringed with papery bits of birch-bark as well as bunches of spider's web.

The solitary vireo is fond of fur or animal's hair if it can be found, or lacking this the feathery part of seeds.

Although the nests are often softly lined,

they have still a sort of roughness, which serves a particular purpose.

Does anyone know what purpose?

Has any Volunteer ever seen a very young bird, and noticed the constant motion of its feet and toes, opening and shutting? The loose structure of the nest allows the little toes and claws to grasp something when they close. It is by this constant motion that the feet and legs are made muscular and strong, so that when the bird is able to leave the nest, the legs and claws will be strong enough to grasp the perch and support the body.

Many of the warblers choose strange materials, cast-off skins of caterpillars, catkins, pith of weeds and feathery seeds, fern-down, mosses, hair and strings.

I have found a kingbird's nest in a young oak which had twisted through it a long piece of clothes-line. One end had a knot in it, and this she allowed to hang down. Perhaps she used it as a latch-string for her callers!

One of the nests given, which I suspect to be that of the song sparrow, is curiously interwoven with pieces of ticker-tape such as is used in broker's offices. It seems as if the bird must have sought the very heart of the city to find so curious a material, and then think of the labor of transporting it, for I found the nest on a hillside covered with scrubby young growth.

Birds choose many ways to conceal and protect their nests. The tree-top builders generally trust to the leaves and height of the tree to keep evil-doers away. It is the low builders that exert the greatest ingenuity in concealment.

What a charming Dutch oven the oven-bird builds, with its tiny opening on one side; you may look at it a dozen times and never suspect that little bump of earth and leaves to be a nest. Some birds choose thorny bushes, or a crotch in a fence, to rear their little family.

Woodpeckers all use holes which they drill out with their strong bills, the chips making the lining. If you follow up a series of round holes drilled in the decayed branch of a tree you will usually come upon one of these nests.

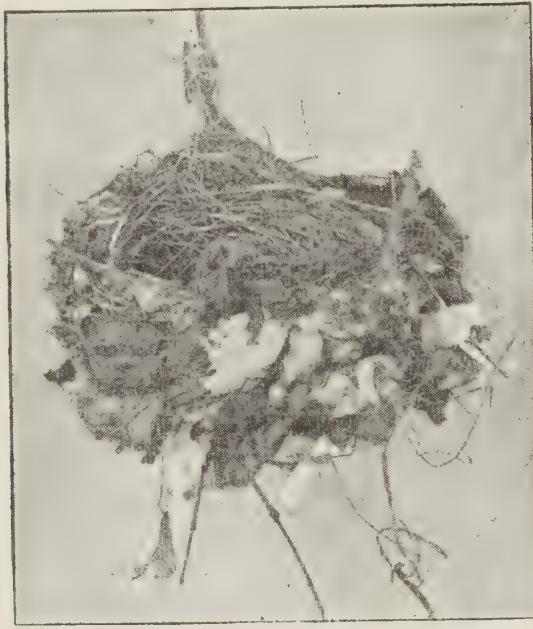
These birds waste much time and labor by drilling several holes before they find one to suit their fancy. These holes, besides forming the nest in summer, answer for a home in winter, though sometimes the male bird drills a hole just large enough for himself, and lets his mate weather the winter storms as well as she can.

The woodpeckers drill new holes for nests each season, and the old ones are quietly appropriated by the nut-hatches, chickadees and brown creepers. Each has her notions of refurbishing the borrowed homes.

The chickadees put down a soft carpet or rug of caterpillar silk or spider webs, mixed with down from plants.

The nut-hatches are satisfied with a mat of grass.

The great-crested flycatcher also uses a convenient woodpecker's hole, but not finding it furnished to meet her fancy, she upholsters it with the most curious material you could possibly guess. Snake-skins! How can the bird know where to find them? Yet she does, and



SONG-SPARROW'S NEST

almost invariably in every great-crested flycatcher's nest you will find one or more cast-off snake-skins.

Wrens, swallows, blue-birds, owls, eagles and some hawks use last year's nests with some slight repairs, or appropriate a deserted one that seems suitable.

A wren will rear a little family in a hole in a tree that seems hardly large enough for the mother-bird. I saw such a nest this winter in a hole in a cedar tree from which a decayed branch had fallen.

The blue-bird and the martin will be thankful for any boxes nailed about the garden to assist them in their housekeeping cares.

By far the larger proportion of our birds build a new nest each season, though often returning to the same locality. Then comes that great army of birds that build not only a new nest each year, but a new nest for each brood.

I have left for the last the two most beautiful nests of all, those of our two smallest birds, the ruby-throated humming-bird and the golden-crowned kinglet. Has any Volunteer ever found or seen either of these nests? If so, it is indeed a triumph.

It is curious that these nests, built by such tiny birds, should vary so much in one particular, size. The humming-bird's is built only for two, the kinglet's for ten!

Of all the lovely, dainty homes built without hands, perhaps the humming-bird's takes the lead. Small, round, set astride a branch usually not thicker than a man's thumb, it is formed of fern-down, and the flowers of the red oak, or the fluff from the "Balm of Gilead" tree. But this is only the interior. On the outside it is entirely covered with bits of lichen and moss, each bit overlapping the other, often several hundred of them, and making the finished nest look as much like a mossy knot as anything. Two creamy white eggs are placed in it, about the size of a large white bean, and so very fragile that it needs the most delicate handling not to break them. No wonder that the birdlings reared in such a fairy-like home should be fed on honey-dew and nectar.

The other dainty nest, the kinglet's, is "pendile," and made to be water-tight, like the oriole's. It is woven carefully in and out with horse-hair, webs, fine grasses, then wadded with moss, down, and the wool from plants. It is a marvel that this tiny bird can keep as many as ten eggs warm, but when it comes to the question of feeding, it would seem as if both birds would be worked to death to keep the clamoring brood quiet.

There is one other little thing to which I wish to call your attention. If you chance to find upon the ground near a nest some nut-shells, shells of grain, etc., do not think you have found a home belonging to some strange, nut-eating bird, for you will be mistaken. No little creature with feathers owns the home now, but a field mouse, clothed in a gray fur coat, has taken it for her own. And how she has adapted it to her needs and the weather!

A little roof has been added to keep out the snow, and in the little doorway on one side are stuffed bits of cotton and wool, to keep the bright-eyed babies from falling out or catching cold. I sometimes wonder which is the happier family, the original songsters, gay of voice and light of wing, or the last tenants, all bubble and squeak.

NANNIE MOORE.

HOT SHOT.



Note book records:

"Birds few and far between. Up to January first have seen, one little screech owl, one great northern shrike, and a female downy wood-pecker, and a black and white creeper."



**

When the Volunteers write me about what they have seen and learned for themselves, they must remember that I do not expect compositions, but just friendly letters. Do not make them too long, and yet take time to say all you wish to.

**

George Arnold, Jr., Rochester, wrote a very pleasant letter. He says he is in the "bird business." We wish our Volunteers to be in the business the same way, for he goes on to say: "What I meant by being in the bird business was supplying them with water, protecting them, and getting acquainted with them as much as we can. We have a list of sixty kinds of birds that we have seen near our house in a year." Quite a large calling acquaintance for one year.

He then asks the best way to give the birds an opportunity to bathe. Shallow dishes are best, and I have found earthen saucers that hold flower pots are very good. Tin or glazed ware frightens them, and for the same reason bird-boxes should be made of weather stained boards, and never gaily painted. The bathing dishes should be filled up at night, for the favorite time for our feathered friends to bathe is at dawn. It seems a little chilly to talk about bathing at dawn in such weather as this!

**

Those Volunteers who are fortunate enough to live below latitude 42° , which is about that of New York city, should be on the lookout after February 28th for the first members of the great feathered army which will soon invade the land, coming up from their winter quarters in the south.

We may expect to see crows, blackbirds, robins, bluebirds, and red-winged blackbirds. The males always come a few days in advance of the females. Do you suppose they leave word on the way up where they have gone?

The blackbirds always travel and live in companies, being very social birds, and sometimes when a large flock is having a meeting, you may hear them discussing matters half a mile away. I suppose they talk over the weather, the state of the crops, and whether it

is going to be a good year for insects. The first time you see a crow-blackbird flying look closely at his tail: he "keels" it, folding up the feathers from the middle. When he is on the ground he is easily told also, for he looks like a small crow, and struts about the meadow or field as if he owned it all.

Who will send me the first postal card, telling of the bluebird's cheery whistle or the robin's clear, loud call?

**

Have you found, when walking in the woods, a little heap of chips stripped from the pine cone? If you do find such, keep a sharp look out, for somewhere in the neighborhood is the red squirrel.

The warm sun of a winter's day brings him scurrying out, shooting up the evergreen trees, out on twigs that seem too small even for his tiny foot. If the food supply seem scant it does not trouble him; not a whit, for he has stores of food laid up, that he gathered in the pleasant July days, when the sap was in the cone, giving the seeds an extra delicious flavor.

He has a long memory for such a small, active little beastie, and though these cones were gathered months before, and are now covered with snow, he knows just where they are, and burrows for them, making little tunnels from one cone to another, and dragging the cones through them, till he gets them to the surface, when he opens and eats them. If the cone supply is exhausted, he eats the seeds of the hemlock and spruce, and, when he can get them, fruits, nuts and berries, maple-seeds and mushrooms. He varies this in summer, I am sorry to say, by eating such young birds and eggs as meet his fancy, for so agile, and such a climber, is he that no nest is safe from him. The last of February he has tired of the dry winter fare and gnaws the bark of the sugar maples, supping the sap as eagerly as a child. He has found out, too, that as the sap exudes from the branch it freezes these cold nights, and that after freezing and thawing it takes a more delicate flavor.

Watch him sipping from an icicle of sugar sap; do not his beady eyes show contentment? For his home, a deserted bird's nest, roofed over and curtained with moss, a woodpecker's hole, or a hollow tree serves equally well. 'Tis in these homes that the queer little squirrels are born and reared. Such bright red little things as they are, with fur so short and bright but not sufficiently rich to tempt the hunter to destroy them!

BUD, BLOOM

& SEED POD.

*Nearer to the river's trembling edge
There grew broad flag flowers, purple, prankt with white,
And starry river-buds among the sedge,
And floating water lilies, broad and bright.*

—Shelley.

Study up.
Repair the trellises.
Air plant pits sometimes.
Don't over-water begonias.
Plan for an open-center grass plot.
Growing callas can hardly be too wet.
The strawberry patch must be mulched.
Manure can now be applied to asparagus.
You needn't tell the plants that days grow longer.
In garden planning let the group be the keynote.
Do you water all window plants alike?
Study distinctive needs.

The blossoming season may be ushered in even now by setting some cherry twigs in a jar of water in a warm, light place. The bloom of such is delightful.

If former plantations of trees have become so thick as to require thinning, do this in ample time, as crowding is a mutual injury. When the branches of one run into those of neighbors, it is time to apply the axe.

Judging from the midwinter displays of blooms in the city flower stores, one would not judge that it is winter. The displays of some of these are simply astonishing. It is June transferred to January and February.

Hot soapsuds and the use of an old tooth-brush quickly works destruction to all kinds of plant scale. After the process drench the plant with clean water. It may be said that the hot suds dislodges and destroys many insects so young as not to be apparent to the naked eye.

In the South early garden work begins. North and South the most successful gardeners are always ready to take some risks in starting their crops early. A difference of a week in earliness usually makes a great difference in prices received for the crop. This is the time to study up ways and means for getting ahead on earliness.

One of the most showy gardens the writer has ever seen is on a flat roof. There are boxes of soil of sufficient size and depth—some six feet across to admit of a center bed-

ding-out effect, by the use of geraniums, petunias, coleus, etc.

Another garden that comes to mind, and which was conspicuous in its vicinity, consisted chiefly of long boxes, about a foot wide, placed on the level of the veranda, and others on the veranda roof and elsewhere. The latter garden, if it may be so called, was owned by a laboring man. The boxes were made of rough lumber. There was no lawn, no surrounding land, only these boxes in the street. But the effect was most striking and advertised the fact that this laboring man was a flower lover.

Careful Cultivation.

Study to excel in growing at least one crop. It is wonderfully interesting to see just what can be done in producing great results by skillful methods. It may be in asters, squashes or strawberries—whatever it is plan for once to beat everything you or any neighbor or the world has seen in that line. A Canadian who did this thing in squashes took the first prize at the Columbian Exposition in Chicago. About two of his squashes fill a one-horse wagon.

Apple Tree Fuel.

In a recent railroad trip the writer met one unpleasant sight. It was that of orchard trees cut up into fire wood. From the trees which remained it was easy to perceive what led to this attack for fuel. The trees were dead or crippled, and that chiefly as a result of bad pruning. One could see that large branches, many of them four and more inches across, had in the past been severed from the trees, presumably on the supposition that what was required to promote fruitfulness, or perhaps to decrease shade to the crops below, was to cut the large branches. As usual, the thing resulted in evil to the tree, making it in time a subject for fire wood. We have not space here to write an article on orchard pruning, but the sight witnessed as above leads us to say this much: Beware of cutting large branches; but if such must be, paint the scars thoroughly and keep them painted.

BROWN TWIGS.

St. Valentine should have been the patron saint of flowers.

During mild winters the yellow jasmine of the South begins to bloom in March.

A well-grown specimen of a common plant is much more desirable than a poor specimen of a rarer kind.

A half-teaspoonful of saltpetre, dissolved in a quart of water, and applied when the earth in pots is dry, will kill white worms.

Not far from Harrisburg, Pa., there is a flowery swamp beloved of botanists, and near the swamp a knoll known as Hepatica Hill. Here, during the warm weather before Christmas, were found whole colonies of the lovely satiny flowers of hepatica, fully opened—pink, white, lilac and palest blue—nodding a welcome upon their fuzzy stalks.

Our plants grow but slowly through long, cold winters and it is a very common mistake to give them too large pots. Few plants will bloom until their pots are pretty well filled with roots, and by giving our plants smaller pots, just large enough, we can find room for a great many more of them in our windows. When longer, warmer days come and the plants grow faster, it is an easy matter to shift them into larger pots.

Among our bulb experiments this winter is one of forcing gladioli in a basket of moss, as hyacinths are frequently grown. The light-colored varieties are said to force most successfully, and to bloom in a much shorter time after planting than they do in garden culture. A friend of ours suggested the experiment, as something new, and recommended their culture in glasses of water, like hyacinths, but we preferred using the moss method.

Kingsley's "Christmas in the West Indies" is a fine book to read this time of year. How real and near those palm groves seem while reading his pages! In that tropical paradise of temperate America, the old United States Nurseries of Short Hills, N. J., beauty-loving New Yorkers used to catch glimpses and dream dreams of Florida almost at their doors, and with slight draft upon the imagination. All along under the long dome of the great palm and tree-fern forest there opened side doors into the smaller houses of feathery ferns and palms.

Some of the most genial gardeners and florists of the world have declared to me that they "took no pleasure in a plant that did not have a flower to it." Others, again, have

seemed to look with pleasure only on stately tree ferns, palms and classical plants of that order, declaring that "flowers were mere fur-belowes to hide a plant's defects in outline." These likings seemed to me to indicate the natures of their owners. Among the first I would expect to find the world's optimists, hospitable, generous, helpful; among the second its pessimists, heroic, perhaps, or poetical, but narrow, gloomy and cynical.

Here is a funny way—but apparently a very successful one—of keeping geraniums over winter. It was told me by an old lady friend. She has a great old-fashioned leather trunk in a small, unused room upstairs. She has her geranium pots carried up and packed away on their sides in this old trunk, and when it is full, covers them over with old flannel, shuts down the lid, and considers them safe until spring. Fuchsias and some other woody plants, she tells me, she has also kept in the same way. In spring, when light and water set their dormant forces to work, she thinks they bloom much better for their complete rest.

Who has tried wall-flowers raised from seed sown in spring as an addition to the winter garden? Are the plants at all amenable to house-culture? I had thought they might be given nearly the same treatment as violets or carnations. They are so sweet and pretty in our early spring gardens that it seems as if they would be accommodating about lending themselves to other seasons. The single sorts, in warm browns, dull reds, yellow and cream, to my thinking, are the prettiest. They bloom with the crocuses and last a long time, but after the delightfully fragrant, velvety flowers have fallen the plants grow scraggly, and we sow the seed every year.

L. G.

FERTILIZER FOR HOUSE PLANTS.

Prof. Van Dyke, of the New York Experiment Station, gives the following prescription for a fertilizer for house plants: Buy at the drug store one and a half pounds nitrate of soda, half pound of phosphate of soda, and one pound sulphate of potash. Mix and pulverize the material thoroughly. When required for use, put a rounding tablespoonful of this mixture in a gallon of hot soft water. To fertilize the plants put a teacupful of the water on a six-inch pot, and more in proportion on larger pots. Do not use oftener than once in two weeks, and do not let the fertilizer touch the foliage.

LETTER BOX.

Let me have audience for a word or two.
—Shakespeare.

Martha Washington Geranium.

I have a Martha Washington geranium three years old. It is a large, healthy plant, but has never bloomed. Can you tell me the reason?

M. H. R.

Ashland, Wis.

Keep the plant during winter in a growing condition, not too warm, and watch for and destroy aphid as soon as it appears. Keep in a good light, and bloom should come in the spring.

**

Otaheite Orange.

E. H., of Kingfisher, Oklahoma, inquires about orange plants which are described as in good condition except for scale insect. These insects should be removed, one by one, going over the whole plant and pushing them off with a pointed stick or the blade of a pocket knife. Then take soap and water and an old tooth-brush and wash and brush the stems and leaves, finally rinsing the plant in clear water. Afterwards watch for the first sign of an insect and destroy it if discovered.

**

Hyacinths in the Garden.

M. L. J., Fitchburg, Massachusetts, inquires about raising hyacinths in the garden, having "grown them in the house a few years with fairly good success." "Would like to know if they can be grown satisfactorily out-of-doors and give nice spikes for a number of years." There is no trouble about raising hyacinths in any good garden soil. Plant the bulbs three or four inches in depth and afterwards give them a covering of well-rotted stable or cow manure, leaving it thus for the winter. The first year's bloom after the bulbs are planted is always the best. The bulbs can be relied upon to give several years' bloom, leaving them all the time in the ground, but the spikes and flowers are smaller and poorer each succeeding year. The bulbs are supposed to be sent out from Holland when in their best condition, and to have fine blooms new bulbs should be planted each autumn.

**

Names of Plants.—*Pittosporum*.

1.—Would like to know the names of the spiraea leaves enclosed; would like to know if No. 2 is *Deutzia gracilis*;

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the leaves are nearly all off the latter while No. 1, the bush, is quite green yet, December 12?

2.—Have a plant called *Pittosporum Tobira*; would like to know something of its habits and how to treat it, whether to keep it in a cool or warm room as it seems to be drooping and does not look healthy.

MRS. H. M. G.

Elverson, Pa.

1.—No. 1 is apparently *Spiraea lanceolata* and No. 2 is *Deutzia gracilis*.

2.—*Pittosporum Tobira* is a plant of very easy culture. It is almost hardy and in winter needs to be kept in a low temperature where the air is moist—about the same treatment as the orange. It blooms in the spring. It is a handsome evergreen shrub that produces freely, in umbels, white fragrant flowers, having the fragrance of orange flowers. It is suited with a friable soil of medium texture to which a little old manure has been added. It should be repotted only when it has filled the pot or tub with roots. Water moderately in winter and more freely in spring when new growth commences.

**

A Mischievous Root Insect.

In reply to Mrs. E. W., of Morotock, Va., page 61, November, I would suggest that in the trouble she mentions it is well to experiment a considerable with different insecticides, so as to find a certain remedy for the pest.

My way is this: I first try the simple remedies, such as hot water, ashes, or mixing sand freely with the soil around the roots. Many insects and worms will not work in a gritty soil, many dislike wood ashes so much that they will leave it at once, and many are killed outright by the use of water just hot enough to bear the finger in for a moment.

Should these fail, I would try a solution, not very strong, of Paris green if the insect be an eating one, or kerosene emulsion if it simply sucks the sap.

In any case, draw the earth away from the roots, so the insects will get the full effect.

Should all of these fail, I should try trapping them on the surface of the ground, gathering and burning them several times a day.

It is my opinion that the pest is the root aphid, and if so I think the ashes and sand will destroy the insects or drive them away, if there are but few.

M. M.

FAMILY COZY CORNER.

*Some said, "John, print it"; others said "Not so."
Some said "It might do good"; others said "No."*

—Bunyan.

The Preservation of Remarkable Trees.

The forests of estates and of the commune often possess trees noted throughout the country, either for the historical or legendary associations which are connected with them, or on account of the admiration which their majesty or their exceptional dimensions inspire.

Such trees form part of the aesthetic riches of France. They add to the beauty of its landscapes; they bring visitors to regions which without them would remain outside the itinerary of travellers.

They cause our forests to be loved and appreciated. The neighboring people have a real attachment for these witnesses of a far-away past, and never see them pass away without regrets.

The greatest importance must then be attached to what should be on the part of the Waters and Forest Commission the object of a constant protection.

They ought not under any pretext to include them in their fellings as long as they still give any signs of life.

In order to secure preservation the heads of the service should set up a detailed nomenclature of them, indicating for each one its name, its situation, its dimensions, and the reason for its inscription in the nomenclature.

If it becomes indispensable to cut down one of these trees, this operation ought only to be done in the future with the special permission of the Commissioner of Waters and Forests.—*Translated by A. J. Perkins from an article in Revue Mensuelle du Touring Club de France.*

**

Going for the Mail.

My home is in the wild lands! In the bottom of a deep, steep, rocky cañon the home nest is builded, and any trip in any direction is an excursion into the wild lands.

Suppose we go to the postoffice. It is three and a half miles, and to many readers would be a delightful bit of experience.

We will wait until four o'clock, for then the intense heat of the day is done, and the cool, soft wind sweeps over the land like a blessing. Our cayuse saddle horses are well trained and sure-footed, and we need fear nothing.

As we climb the narrow, rocky grade that leads to the ridge, dry brown bunch grass, gray sage brush and curious seed pods of various wildlings are the most that is to be seen, for the dry season is upon us, and it is very, very dry indeed.

But the ridge once gained, what a panorama is spread before us! At our right a wide plateau, gashed by great chasms or cañons, shows every shade of brown and green and golden yellow, as it slopes away to the bold, beautiful Columbia. At the left, the bare, irregular bluffs near at hand give place gradually to great, irregular mountains and buttes, some bare and brown, others clothed in pine, fir and juniper to their summits.

There are deer in these mountains, and trout in their clear streams. Aye, and there are cougars, too, sometimes, and wildcats and lynxes; and the cry of the eagle is a common sound. And among the evergreens grows many a strangely beautiful flower. About these mountains seem to hang ever a blue haze; hence their name.

Now, looking before us to the west, behold the long, shadowy line of the Cascades, with here and there a great white giant, head and shoulders above the rest. Away to the north is Mount Adams, then Tacoma or Rainier, while directly in front stands white, cold, peerless Mount Hood, his glaciers sparkling, and his snow fields lying white and unsullied beneath this burning July sun. We canter swiftly along the level ridge, every nerve thrilled and ex-

hilarated by the rare, sweet air we are breathing, for remember we are 3,000 feet above sea level.

Soon the road becomes a grade again, and we are now rapidly descending into a cañon far steeper, narrower and rockier than the one we just left. Indeed, it seems all rock towards the bottom, one side a solid wall, on which nothing can grow but tufts of soft green moss and the yellow starry sedum—all dry and brown now.

On the opposite side the wall is of small loose rocks, so loose that even a cayuse horse cannot maintain his footing. But from out that chaos of brown rock has sprung wondrous beauty. Great masses of the wild syringa, heavy with long wreaths of snow-white bloom, perfume the cañon with the fragrance of orange blossoms. A wild clematis (*C. brevifolia*) runs all over the wall, a riotous mass of glossy green leaves and silky white clusters of scented blossoms, transforming the ugliness of the rocks into a thing of indescribable beauty. We halt to drink in the rich, wild beauty of the scene, and marvel at the skill with which the Creator has draped the hidden recesses of his world with such exquisite loveliness. As we ride slowly past the great clumps of wild rose bushes, laden with their scarlet heps, a saucy, shining magpie chatters and scolds us as we pass.

As we gain the uplands the dear, familiar face of the golden rod smiles on us as brightly as in our childhood days. The curious blossoms of the calochortus peep out from clumps of sage brush, or sit nodding from their leafless stems like gay lavender and purple butterflies, and all the land is white with the white yarrow and wild tansy.

Something in that clump of willows has attracted the attention and aroused the combativeness of the black dog that is following us. He barks ferociously, poking his head in among the willows, only to spring back with a sharp yelp, his tail between his legs, his hair bristling. Ah, I can guess. Old Nig is no coward, but neither is he a fool, and there is one animal here that no sensible dog attacks twice, and Nig has tried him once. Ride closer. Yes, there is the queer, clumsy body, small head, narrow eyes, and bristling quills of the porcupine. Woe to the dog that gets his mouth and nose filled with those villainous quills! They will bury themselves and go "working" around until they reach the surface in some other part and work out. Should they touch a vital organ, his doom is sealed.

Another sound attracts us, and on the ridge, scarce half a mile distant, we see a brace of bloodhounds, their noses on the trail, their deep-toned, regular baying echoing along the hills. Only a short distance ahead of them, his bushy tail almost dragging the ground, goes their prey—a gaunt yellow-brown coyote. He is the fellow whose howl makes night hideous, and who is the terror of poultry yards and sheep corrals.

Here and there a young jack rabbit stands but a few feet from the road and watches us with curious eyes. And in yonder field, among a colony of "sand rats," his natural prey, a fat badger, with pretty striped gray and white face, stops digging to watch us pass. Nig passes him with a surly growl. He has learned wisdom from experience.

But we have lingered long, and when the postoffice is gained at last, we look once more at grand, stately Mount Hood. The sun has set behind the white monarch, and he stands as clear cut as a cameo against a sky of pearl and gold—white, pure, majestic, guardian and king of all this beautiful wild land.

"A monarch art thou, ermine robed;
No taint of earth thy grandeur mars.
Draped by soft folds of snow white clouds,
Crowned by the everlasting stars."

Mayville, Oregon.

EMMA B. FRENCH.



EDITOR'S NOTES

Destruction of Orchid Collection. The greenhouse range of Mr. George Schlegel, near New York, was totally destroyed by fire early on Friday morning, December 8, 1899. These houses contained a noted collection of orchids. The loss is estimated at \$20,000. Some of the specimens were valued at several hundred dollars each.

* *

Dichorisandra—Correction.

correction. On page 70, 2d column, line 11, occurs the word *winter*; the word *summer* should be substituted for it, as it is in the summer season that this plant makes its greatest growth and then requires a free supply of water.

* *

Pure Food.

of Reviews, by Harry B. Mason. The writer notices some of the recent state legislation of pure food laws, briefly reviews the list of adulterated foods, shows the deleterious qualities of some of the adulterants and "preservatives," compares the conditions in regard to adulteration of food in this country with those in England, greatly to our disadvantage, reviews what has recently been done towards securing national legislation on this subject, mentions the appointment of a Senate committee to investigate the subject, and shows the necessity of passing a carefully prepared law to secure pure food products.

* *

Sweet Pea Exhibition.

attending the great Sweet Pea show that has been proposed, and for which arrangements are now being made, though the exact date has not yet been decided upon. This exhibition of sweet peas is intended to bring out the flowers from the best growers in Great Britain, and will, no doubt, be very fine. It is intended as the bi-centenary celebration of the introduction of the sweet pea into England. Besides the show of flowers there is to be a conference where papers will be read and addresses made on all subjects relating to the flower; prizes will be offered; prominent horticulturists and sweet pea fanciers will make the gathering interesting by their presence and counsels, and a banquet and other social observances are expected. In a later issue more definite information may be given in regard to the celebration.

* *

American Carnation Society.

The Ninth Annual Meeting and exhibition of this society will be held at Buffalo, N. Y., February 15 and 16. The large display of flowers which is expected will be made in Morgan Hall, near the Genesee Hotel. Exhibits should be addressed to Charles H. Keitsch, 495 Washington street, Buffalo. It is expected, also, that a number of fine new seedling varieties will be offered in competition for special prizes. There is a silver cup of the value of \$25 offered for the best Crimson Seedling Carnation; another silver cup is offered for the best light pink seedling; another for the largest and best display; the American Carnation Society offers a fine silver cup for the best arrangement of carnations. The Lawson gold medal valued at \$60 is offered for the best vase of 100 blooms, any variety or color. A silver medal is also offered for the best vase of twenty-five blooms of a new undisseminated variety of carnations. The society offers

a large number of other premiums, sufficient, undoubtedly to bring out a grand display. The premium list can be obtained on application to the secretary, Albert M. Herr, Lancaster, Pa.

* *

Massachusetts Horticultural Society.

The amount appropriated for prizes and gratuities, the present year, is \$8,150. The principal exhibitions are to be held as follows:—

Spring Exhibition; March 20, 21, 22 and 23.

Rhododendron Exhibition; June 6 and 7.

Rose and Strawberry Exhibition; June 22 and 23.

Annual Plant and Flower Exhibition; September 5 and 6.

Annual Fruit and Vegetable Exhibition; September 27 and 28.

Chrysanthemum Exhibition; November 6, 7, 8 and 9.

Besides the above exhibitions there will be weekly shows from June 30 to August 18. On the last date there will be an exhibition of Aquatic Plants and Flowers, Asters, etc. The prizes offered for special objects are numerous and generous in amounts. During the winter and spring weekly meetings of the society are held for the delivery of lectures and reading of papers. The meetings of this kind yet to be held are as follows:—

February 10; Gardens, Fields and Wilds of the Hawaiian Islands, by John K. M. L. Farquhar, Boston.

February 17; The Future Outlook for the Fruit Grower, by S. D. Willard, Geneva, N. Y.

February 24; Stereopticon Lecture on Massachusetts Forestry, by Mrs. Mary Lathrop Tucker, Newton, Mass.

March 10; Carnations and their Development, by C. W. Ward, Queens, N. Y.

March 17; Japanese Plums, by George S. Butler, Cromwell, Conn.

* *

Actinidia.

Under the name of "Silvery-Sweet Vine," Peter Henderson & Co., in their latest catalogue are offering *Actinidia polygama* (*true*, they say). They mention it as a hardy climber, from Japan, of remarkable beauty. Flowers are said to come in this latitude about middle of June and last two or three weeks, creamy white, sweet scented. Ellwanger & Barry of this city have offered *A. polygama* for several years, and it is a strong, handsome hardy climber. The *Rural New Yorker*, last summer, made the statement that this plant sent out by Ellwanger & Barry was not *A. polygama* but *A. arguta*. It did not give any botanical authority for this name, and the best and latest horticultural and botanical authorities we have been able to consult do not name species *arguta*. The journal named refers to Prof. W. P. Brooks, of the Massachusetts Agricultural College, in support of its contention, and we suppose its position is correct; but it would be a satisfaction if the *Rural* or Prof. Brooks, would give the botanical authority for the name or species, *arguta*. The *Rural* quotes a "Japanese book" for the statement that *A. polygama* has two or three snow-white leaves towards the top of the branches, in June—that is the new growth, and the ripe fruit is of a reddish color. It also gives the authority of Prof. Brooks for the statement that the fruit of *A. polygama* is of a "larger size and of a green color even when ripe," and that *A. arguta* has "fruit of a reddish yellow color." So, the descriptions of the "Japanese book" and Prof. Brooks are somewhat mixed in relation to the fruit. Peter Henderson & Co., say; "The foliage on the ends of the flowering shoots is of a glistening silvery-white color, giving the whole vine, from a little distance, the appearance of being covered with large white flowers among its bright green leaves." So, if Peter Henderson & Co., have what they claim to have, it is to be supposed that the "Silvery-Sweet Vine" is the true *Actinidia polygama*. In that case it is the first time that this plant has been offered for sale in this country.

Among the Seedsmen.

Before going to press with this issue we have received the following annual catalogues from Seedsmen and Nurserymen. Most of these are filled with fine half tone and wood cut illustrations. To fully describe each as we would like would require many additional pages in the Magazine. They are very attractive, and how firms can circulate such expensive price lists free, is astonishing.

F. BARTELDES & Co., of Lawrence, Kansas, send out a 1900 catalogue of 80 pages filled with illustrations of vegetables and pleasing cuts of flowers. Special attention is given to Deciduous Tree Seeds. The cover is attractive with bright colored Sweet Peas and Pansies.

W. ATLEE BURPEE & Co., Philadelphia, Pa.; Burpee's Farm Annual for 1900 contains 140 pages filled with fine engravings and descriptions of flowers and vegetables, also a colored plate of new Sweet Peas. The outside is lithographed and embossed, showing Nasturtiums and a dainty maiden on the front cover with a beautiful and life like representation of Rocky Ford Melon on the back.

W.M. ELLIOTT & SONS, 54 Dey street, New York City, seem making a specialty of the end of the century. Fairy children and flowers adorn the front cover, while golf links on the back advertise Bowling Green Grass Seed. Seventy-six pages are well filled with representations of flowers and vegetables; horticultural tools, insecticides and fungicides occupy an important place.

H. L. HOLMES, 2d and Chestnut street, Harrisburg, Pa. This catalogue comes to us fresh and pleasing as ever. With their

motto "The Best, None Better and They Grow" we gain confidence in seeds. Gracefully arranged flowers are on the front cover, and tempting things for the garden on the back, while the thirty-two pages inform the public regarding things needed in and about every house. Thoroughbred stock and Scotch collies are advertised by this firm.

PETER HENDERSON & Co., 35 Cortlandt street, New York City. Their catalogue, always beautiful, seems to surpass itself this year. The cover must be especially appreciated by New Yorkers. It compliments the city, giving as it does, a good representation of the Dewey arch on front cover and General Grant's tomb on back. The exquisite Dewey Rose and finely colored Sweet Peas add much to the outside, while within one finds six colored plates and valuable information on each of the 190 pages.

HENRY F. MICHELL, 1018 Market street, Philadelphia Pa., seventy-six pages illustrated with half-tones and wood cuts. The cover is finely lithographed in colors, giving a very good representation of Sweet Peas and Nasturtiums on the front, and on the back a pleasant country home with Cosmos forming a border. A colored plate of Cape May golf club grounds, will please many, showing what fine lawns can be had by following the directions of American seedsmen.

Specialties in all lines are popular; consequently the catalogue of GEORGE B. MOULDER, Smith Grove, Ky., is especially attractive. It contains good illustrations and full directions for making ponds and raising water lilies.

SAMUEL H. RUMPH, Willow Lake Nursery, Marshallville, Ga. Twenty-eight page illustrated price list of fruits, vines, etc., neatly printed on fine paper.

No doubt our subscribers have noticed how neatly the address has been printed on the envelope which carries the MAGAZINE each month. Although it costs much more to have the name and address set up in type, we are pleased to go to this expense because it is always the same and insures safe delivery.

When a subscription expires we are obliged to take the address out of our forms, and if renewed later it has to be restored, which makes useless expense, consequently we request our friends to renew their subscriptions promptly.

The MAGAZINE is being furnished at a very low figure, and although some say we cannot supply such a good work for the money, we are determined that each issue shall be better than its predecessor.

If our friends will kindly give us a little assistance by sending a new subscription the same month the old one expires, and by speaking a good word for VICK'S MAGAZINE whenever possible, it will strengthen the determination of the publishers to give you a valuable publication for little cost. If your name is not correctly printed on envelope please notify us.

VICK'S MAGAZINE is entirely independent from any other business; be sure and address all communications to VICK PUBLISHING Co., Triangle Building, Rochester, N. Y.

HEADQUARTERS VICK'S VOLUNTEERS, February, 1900.

Dear Volunteers:—Many letters came after the February MAGAZINE was in the printer's hands and therefore too late for this issue, but will be in the March number.

VICK'S MAGAZINE was the first to open a department of Nature Studies and to form a society for young people, where they can tell each other about the wonderful things they see and learn when out in the woods or at home on the small city lot. We hope all our young friends will improve this opportunity to join the Volunteers, and also invite their friends to come with them. We have room for a whole army, and will ask you to watch for the next number to see how the army is to be officered and systematized. A button has been forwarded by mail to each Volunteer, and no doubt many comrades are now showing their colors and working earnestly for their own and our good.

 **There are no dues.** Our army is organized to awaken an interest among young people in what is going on about them, that their eyes may behold the treasures of nature. There is no money payment to be made, but simply a promise to write at least once during the year something of interest they have noticed in relation to animals, insects, birds, flowers, or plants. Not a composition upon some bird or insect, but a little statement of what you have noticed.

The questions of members will be carefully answered. If a personal answer is required, a self-addressed and stamped envelope should be enclosed. In fact we hope to make Vick's Volunteers an active, earnest organization, content in times of peace to learn how many unguessed forms of loveliness are all about us; or, at the call, make war upon the destroyers of our shade trees, our birds and our flowers.

All communications on this subject should be addressed to

Vick's Volunteers, 30 Triangle Building, Rochester, N. Y.

In making application to join Vick's Volunteers please fill out and sign the blank at the top of the next page, cut it out and send as above stated.

Application
for
Membership
in
Vick's
Volunteers.

PLEASE ENROLL my name on the list of Membership of
Vick's Volunteers

I hereby promise to send, at least once during the coming year, to Vick's Magazine something of interest that I have noticed in relation to Flowers, Plants, Trees, Birds, Insects, or Animals.

Name

Post Office

Date

State

We want one or two bright boys or girls in each town to act as agents for VICK'S MAGAZINE. We can make it an object for anyone to take subscriptions. Write for particulars. One boy twelve years of age secured three subscriptions one day, five the next and five more the third day, and was sorry his mother would not let him work longer each day. What one boy has done, other boys and girls can do. Who will try?

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We will give One Hundred Dollars in Cash for the largest lists of subscribers as follows:

\$50.00 cash to the person sending largest list of subscribers before April 1, 1900.

30.00 cash to the person sending second largest list of subscribers before April 1, 1900.

20.00 cash to the person sending third largest list of subscribers before April 1, 1900.

If willing to act as agent write for particulars. We will make it an object for any person having a little spare time to work for this the oldest and best magazine of its kind in America.

Single subscriptions 50 cents per year. A club of five to one or more addresses for 40 cents each or \$2.00.

Clubbing Rates in the United States and Canada.

	Regular Price	With VICK'S MAGAZINE	Regular Price	With VICK'S MAGAZINE
CENTURY MAGAZINE	\$4.00	\$4.00	COSMOPOLITAN	\$1.00
REVIEW OF REVIEWS	2.50	2.50	DELINERATOR	1.00
ST. NICHOLAS.	3.00	3.00	McCLURES	1.00
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HARPER'S MAGAZINE	3.00	3.00	PURITAN	1.00
HARPER'S WEEKLY	4.00	3.75	QUAKER	1.00
HARPER'S BAZAR	4.00	3.75	ARGOSY	1.00
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N. Y. WEEKLY TRIBUNE	1.0075	WOMAN'S HOME COMPANION	2.50
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AMERICAN QUEEN5080	OUR LITTLE FOLKS75

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I have just published a little book in regard to this blessed truth called "A Message of Health and Healing." If you write to me I will gladly send you a COPY FREE. It gives many interesting facts and convincing testimonials. Enclose 2-cent stamp for postage, S. A. Jefferson, C. S. B., Room 1817 Masonic Temple, Chicago, Ill.

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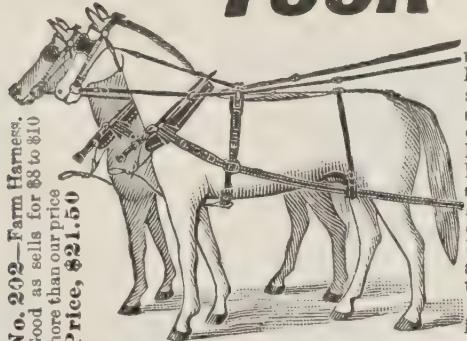
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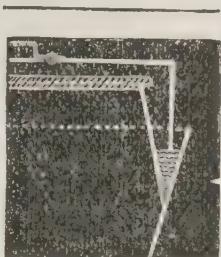
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Whether you're short or whether you're tall,
Whether you're fat or whether you're lean,
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You'll find taking Ripans a very good plan.

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It will keep your chickens strong and healthy. It will make young pullets lay early. Worth its weight in gold for moulting hens, and prevents all diseases. It is absolutely pure. Highly concentrated. In quantity costs only a tenth of a cent a day. No other kind like it.

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Therefore, no matter what kind of food you use, mix with it daily Sheridan's Powder. Otherwise, your profit this fall and winter will be lost when the price for eggs is very high. It assures perfect assimilation of the food elements needed to produce health and form eggs. It is sold by druggists, grocers, feed dealers or by mail.

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7 $\frac{1}{3}$ octave.

Double lever, grand repeating action.

Grand scale, overstrung bass, three strings to each note in the middle and treble registers.

The scale is the same as in grand pianos, with the largest size of sound board and strings of greatest length, thus giving the greatest volume and power of tone.

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Choice of superior Circassian walnut, rich figured mahogany, genuine quartered oak, and ebonized.

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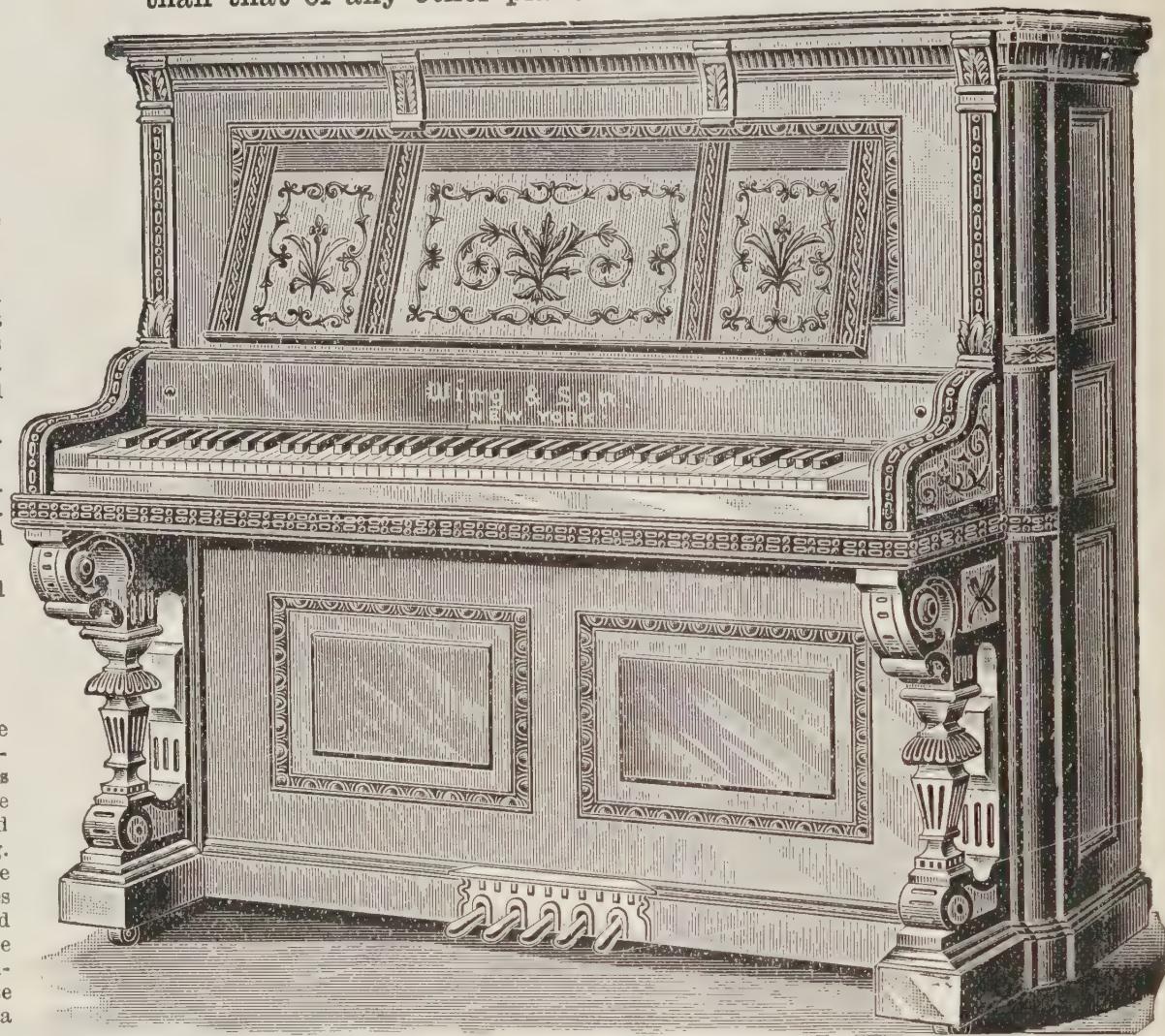
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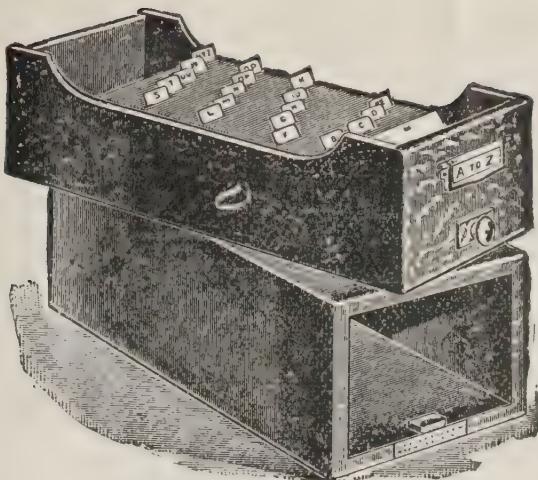
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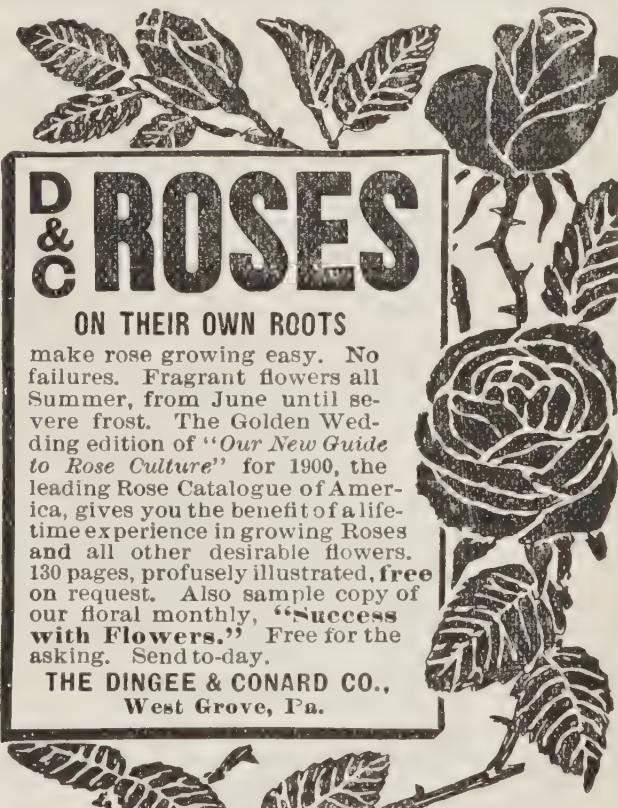
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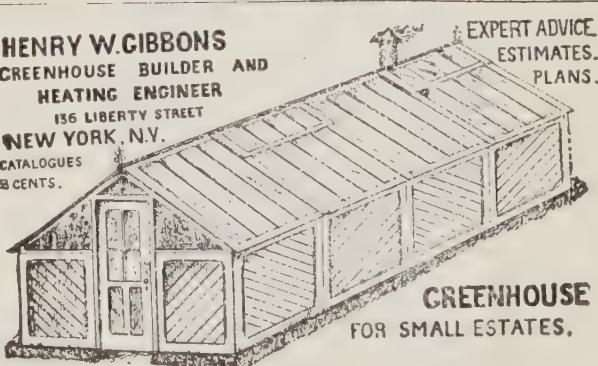
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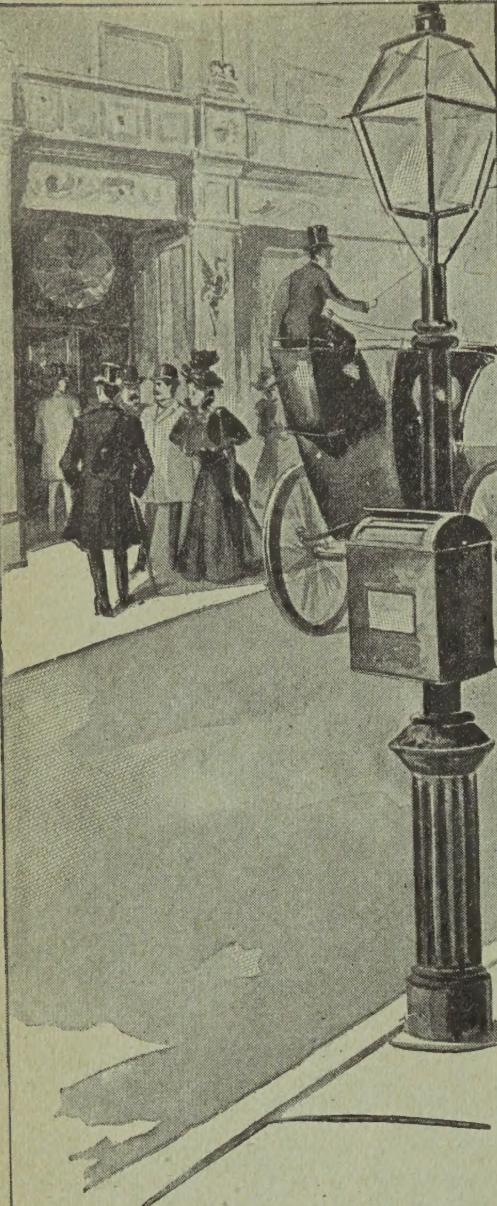
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